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An Even Better Way of Life

When we've lived all our life on a farm we seldom think of what's involved in that life. Regarding it as a whole, we may never examine its aspects separately. But if we take a little time to consider each group of activities, we'll understand better what is meant by saying that farming is a way of life.

First, of course, there's growing crops and caring for livestock and marketing their products. Then, within the home, there are the tasks of housekeeping, preparing meals, keeping clothes in order and a thousand and one little jobs — everything that's needed for the comfort of the family.

There are other activities not directly concerned with making a living, or even the purely physical side of life, but still just as necessary for happiness — church or community affairs that help to produce a warm neighbourly spirit and get everybody to work together; and some sort of useful and enjoyable home activity for youngsters and for adults' odd moments.

None of these activities is overlooked in the work at Macdonald College. There is a vast reservoir of up-to-date information on farming — some unearthed right at the college, some accumulated from other sources. There is a School of Household Science whose task it is to point out the easiest and best ways of doing the work around a house, preparing good, appetizing meals and making a cheery, comfortable home.

There is the Adult Education Service, that deals particularly with community improvement and the enjoyable use of leisure time; the Farm Forum office, the nerve centre of that great farmers' movement; the Women's Institute headquarters, connecting the activities of all the groups in Quebec; and the School for Teachers where young people are trained to open youngsters' eyes to the world's great possibilities.

It's the task of the Macdonald College Journal to keep readers abreast of the latest developments in all these fields, and to bring you any other information you particularly want. Its sole objective is to do everything possible to help farmers achieve a better life.

This is your paper. So, after reading this issue, why not sit down and drop us a few lines to let us know how it suits you, and how you think it could be improved? Your criticisms and suggestions can help us do a better job in 1947.

Getting More from Live Stock

Live stock is the key to most Eastern Canadian farming. So this month we're dealing with some questions vital to the live stock industry.

Fairs are one of the most important influences on live stock. They play a big role in setting standards, introducing new practices and stimulating interest in better stock. So we're devoting two articles to fairs — one that discusses what most Eastern fairs have been doing, and a second that suggests a lot of things that could be done to make them more effective in improving farming in their communities and giving people their money's worth.

As we've said, fairs play a big role in setting live stock standards. But it isn't enough to start with a good animal — to be profitable it must be properly fed. And with the shortage of some feeds right now, that's a big problem. So we have an article telling how to get around the dairy feed shortage.

Even when a cow is of good type and well fed, these things in themselves are no guarantee that she will be a good milker. To get the most out of a herd it's necessary to weed out low producers; and for this we need to know how productive each cow is. How some breeders have used this knowledge to develop really profitable herds is shown in an article which tells about Eastern Canadian cows that have turned in fine records in 1946.

As you will notice, we have concentrated particularly on dairy cattle. This is not because there's nothing interesting to say about other live stock, but because the dairy industry is the base of agriculture in Quebec and the Maritimes. A second reason is that the dairy breed associations have taken more interest in scientific improvement of live stock than any other group.

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AGRICULTURE

Articles on problems of the farm

What Have Our Fairs Been Doing?

From the 1946 trends it seems that most shows are making a sincere attempt to serve their communities even better than they did in the past.

by L. H. Hamilton

THE fair and exhibition season of 1946 was a great success, with larger entries in all classes of exhibits and record crowds of visitors. Old established institutions such as the Royal Winter Fair in Toronto, the Amherst Winter Fair in the Maritimes and numerous other fairs and exhibitions in eastern Canada, which had been suspended during the war were started again.

There was evidence at many of these fairs of an attempt to make them serve more fully the purpose for which they were intended. This means an awakening of community spirit and fresh consideration of grants from governments, breed associations and other organizations.

In reviewing the 1946 fair season one cannot help being impressed with the vigour and determination of our farm population. In spite of labour problems, shortages of equipment and many inconveniences in doing farm work, the crops were harvested, the exhibits brought out in good condition and the attendance was large. After the years of "shut down" one could have understood, if the quality of exhibits had not been up to expectation. But, with occasional exceptions, the standard was high and the organization was efficient and spectators showed a keener interest than ever in most of the events.

In the live stock shows, animals of merit were brought forth from some rather unexpected quarters. New breeders and exhibitors took a good share in the winnings and other

formerly obscure breeders came through with splendid showings. The type of animal to be desired was reestablished; but as in the past, errors of judgement and mistaken emphasis played their part. Apart from this the usual midway entertainment including its skills, delusions and vice occupied a more or less prominent place at some fairs.

This all leads to the question: What makes fairs and exhibitions such an attraction? To find an answer let's take a look at some of the 1946 fairs.

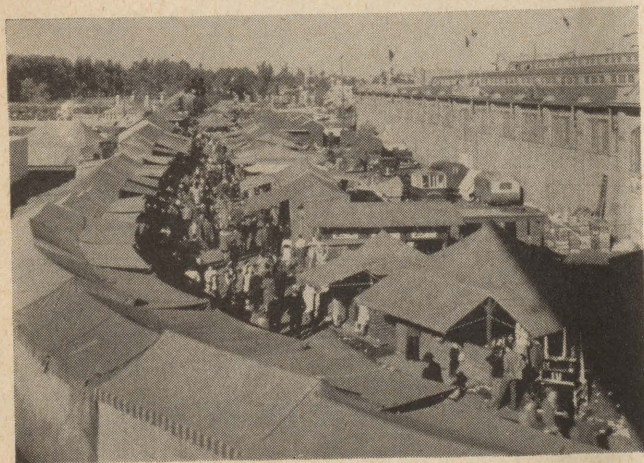
In the Maritimes the Amherst Winter Fair was a special attraction. This was attested by the crowds which attended and the exhibits which were thoroughly representative of the three Atlantic provinces. Because a herd which takes the ribbons at Amherst soon becomes known, this publicity was sufficient to bring out the best. In addition the accommodation for housing stock was adequate and comfortable.

Livestock therefore, featured the show. But it was something more than a livestock show in the ordinary sense. Judges were carefully chosen, primarily because they had the reputation of knowing their work; but in addition judges were selected because of what they might contribute to the breed meetings which were held in connection with the fair.

I attended one of these meetings and was much impressed with the purpose and plan to seek information and evolve programmes for a better live stock industry. I believe that, while this idea is not new, it was never before so effectively used as this year at Amherst.

In addition to the regular live stock classes, special attention was devoted to the end products. In the meat animals a special exhibit of cross-bred lamb carcasses proved a big attraction. Hog carcasses were also prominently displayed and I have no doubt that beef will find a prominent place in the future. The work of the Carlton County-seed-cooperative did much to advertise the greater possibilities of seed production and resulted in substantial sales of grain for seed at a profitable price. This is as it should be. More fairs might be organized to support the enterprise of the community they serve in a much bigger way than they are doing at present.

The amusement programme was featured by a horse show and tug of war. Both features were put on each



Whether it be a large Provincial Exhibition like the one pictured here or a more modest local effort the fair has something for everyone.

evening and attracted much interest. The tug-of-war contest was a real thriller. The pull was as exciting as the finals in the national hockey league contest and the atmosphere was tense until the winners were finally declared. This emphasizes the desirability of featuring more athletic competitions in amusement programmes.

Quite a different type of fair is the summer exhibition. Originally established as agricultural shows, these exhibitions have grown to include manufactured products. The exhibition of new products and the advertising value of these shows has assumed greater and greater importance and the midway has also come into greater prominence. This has resulted in less and less recognition being given the agricultural features for which the exhibition was established. Farmers seem to be losing interest in this type of fair, where people go for a so-called good time and to see the sights rather than for the interest they have in the agricultural exhibition.

This is in direct contrast with the breed and calf club fair where no outside attractions exist. This type of fair has grown in popularity and importance in recent years. The large and well-brought-out exhibits, the keenness of the competition and the local interest has been responsible for a growing attendance from a larger and larger section of the countryside.

There is much to commend this type of fair. It is held

for one day only; it provides an opportunity to get better acquainted with neighbours and to build up community spirit. It should result in pride and good will.

The judging competitions which are a regular feature of such events mean much in spite of the criticism so often levelled against them. They not only help our farm youth in developing confidence and self-expression but they establish an interest and appreciation in good live stock, good farming and citizenship. It would seem that they should be extended over a wider field. This should be quite possible to accomplish since they do not involve large financial grants. In fact, many of them are dependent on local contributions.

While no attempt has been made to cover this subject fully, enough has been said to give an idea of the usefulness of various types of fairs and exhibitions. The purpose of the fair is to provide an opportunity, not only to advertise and dispose of stock and farm products, but to observe some of the finer points in production and showmanship. When properly organized, they can be very educational, and they can be very effective in developing local enterprise.

If this purpose is kept constantly in mind our future fairs may be improved and new fairs developed on a basis which will be of considerably greater benefit to our farmers and our agricultural industry.

Strohmeyer Says: "No More Retouching"

A photographer's decision that may have far-reaching effects in the livestock world was announced this fall. Strohmeyer and Carpenter Inc., of White Plains, New York, decided not to retouch any more of their livestock photos.

That decision would not be at all important if made by most photographers. But this firm happens to be headed by the best livestock photographer of North America, and probably of the world, Harry Strohmeyer. Most of Canada's best animals have been photographed by him. For years his name on a print has been a guarantee that the photograph was just about the best that could be taken of that animal.

Thousands of animals have been bought and sold at high figures on the strength of Strohmeyer photos. So when this firm announces a change in policy it is important to all livestock men. And other photographers are likely to follow suit.

What is retouching, anyway? In the sense used here, it is a matter of changing the negative so that the photograph covers up an animal's faults, making it appear as much as possible like the ideal type for the breed. Thus people, on seeing a retouched photo of a poor animal, may be misled into believing that it's a real world-beater.

Retouching has long been a subject of controversy in the livestock world. But it has been insisted on by some

breeders who considered that every animal, no matter how miserable a specimen it might actually be, should be made to appear beautiful in photographs. These people contended that unretouched photos of poor animals would be a black eye for the breed; and they probably also hoped that, by having photos of their stock retouched, they could get more for the animals.

However, the people on the buying end began to get wise to the way they were being fooled, says Harry Strohmeyer. Even beginners were remarking that, particularly in the beef breeds, all sale catalogue pictures looked alike and that, apart from head characteristics, they didn't tell anything about the animals. And even the people who hadn't noticed this point found that animals, when viewed on sale day, were often very disappointing compared with the retouched photographs in the advertising.

As a result, public confidence in photographs had begun to break down, and breeders were even beginning to question the value of including photos in their sale catalogues, since nobody expected the animals to look like them, anyway.

These were some of the reasons that Strohmeyer and Carpenter felt the time had come to re-establish the confidence of the buying public and livestock breeders in general in professional livestock photos, and decided that the only way to do this was to stop retouching.

How Can Our Fairs Do More?



Good cattle, good barns and comfortable seats in the shade combine to make Lachute dairy cattle classes a real success.

by John Snedden

MANY fairs that seemed pretty wobbly back in the thirties have become very solidly established, drawing bigger and more enthusiastic crowds than ever before. This might be explained by saying that people want to relax once in a while, now that the war's over. But there's more to it than that — fair visitors are relaxing in a different way than in 1939, and going home more satisfied and less broke.

The fairs that are doing best today are the ones that have concentrated on improving their agricultural shows, not those that are relying on midways to draw their crowds. This trend started with the early breed shows, which, with nothing to offer but live stock competitions, drew thousands of spectators to local events. Their success encouraged some fairs to handle their live stock events the same as breed shows, encouraging local farmers to bring their stock out. Interest in these fairs zoomed, and many more fairs began to spend less on cheap carnivals and pay more attention to genuine agricultural attractions.

Conclusive proof that it pays to play up good farm exhibits came with the revival of the Royal Winter Fair, when 40,000 to 50,000 people flocked daily to see a show without either races or carnivals — just a fine farm fair, with a few fancy horses thrown in. Visitors went home with a much better idea of Canadian agriculture, and considerably more respect for the Canadian farmers who could stage such a genuine spectacle.

So much for the Royal. What have other fairs done, to account for the rapid growth of interest in them? Lindsay, one of the most successful in Ontario, laid out its grounds for the greater convenience and comfort of exhibitors and visitors. It streamlined its whole layout to make things easy to get at, put a subway under the racetrack for safety's sake, and installed drinking fountains in handy spots so

Here are a lot of ideas that have been applied successfully at some shows, and could easily be used to brighten others up to make fair day the biggest event of the whole year.

that thirsty people wouldn't have to drink pop until they almost burst. Lindsay also put in comfortable rest rooms, which are kept clean and bright. Not much wonder Lindsay fair's attendance records have zoomed.

Some of the western exhibitions have increased their restaurant service and cracked down on poor meals, so visitors can be sure of good food at a reasonable price. They have also built comfortable quarters to provide sleeping accommodation for exhibitors.

At the Maritime Winter Fair breed groups met to thresh out their problems and decide on uniform standards. That's one matter that could be improved on a lot of circuits — getting judges to agree enough on standards to keep from confusing visitors, who are sometimes rather befuddled when placings at different fairs and in different years seem to follow no logical pattern.

Some fairs are beginning to appreciate the importance of interesting children, as well as their fathers and mothers, in the main business of the fair, and have organized guided tours of school children. They have also developed working models and peppy displays that make the kids' eyes sparkle more than the gaudy trinkets on the midway. Quebec is doing an especially fine job in its handicraft and mechanical displays, with people actually at work on the job all the time. As a result, these are one of the most popular features of the exhibition.

Good Stands Help

Now for the livestock section. What can be done to increase interest in judging at the smaller fairs? The first ingredient might be to provide comfortable stands for spectators, so that they can see what's going on without straining their necks. This has been done at many of our fairs, and has resulted in considerably bigger and more interested ringside crowds. Ormstown has gone much further than many of the other exhibitions of its size, in building an arena for judging and for staging its horse show, so that bad weather can't ruin the fair.

The usefulness of these arenas is not limited to fair week — they can double as skating rinks and for many other activities, providing a community sports centre.

A second ingredient in increasing interest is to help fair visitors to understand exactly what's being done, and why. At some B.C. shows the judge explains his placings in each class, over a loud-speaker system. This has met with a very fine response in increasing ringside crowds.

Lachute has lighted its horse ring and installed an all-over public address system to keep things moving smoothly and let people know what's going on, and where.

This business of letting visitors know what's what makes them feel a part of the show, and so they take a keener interest in it. Many fairs print catalogues giving the name of every entry in each class, and that of the exhibitor. They've generally found that, with these catalogues to give them the inside dope on the classes, casual visitors have soon become interested spectators around the show ring — particularly when each class is announced as it comes out, and the winners announced at the end.

Show Where Beasts Stood

One shortcoming in the past has been that as soon as animals are back in the barn the ribbons are usually put up in a string on the owner's sign, and there's no way for the casual visitor to tell what animal took what prize. Some fairs are printing cards with "1st Prize," "2nd Prize," "Grand Champion," etc., and the name of the breed, and making sure that they are hung above the winners' stalls right after judging, so that people who weren't able to watch the show can see what the prize-winners look like. This enables even city people and youngsters to recognize each breed, and get an idea of the difference between a first and a fifth place animal.

Other features that proved popular this year were livestock grooming and dressing demonstrations in front of the grandstand at Saskatoon, and working demonstrations of farm equipment and machinery at the International Plowing Match, Port Albert, Ont. In fact, anywhere that people or machines were shown doing routine farm jobs unusually well, they drew a big gallery.

And anything that got visitors doing something is also popular. Nobody knows how much of the success of the breed shows has been due to their judging contests — senior as well as junior. These contests give people the feeling that they are an active part of the show, and they are especially important in developing farm boys and girls.

Another innovation that has drawn a lot of support for some fairs is the inclusion of classes for junior competitors. Not only do they give boys and girls an education in some aspects of agriculture, but they increase parents' interest in the fair, and even educate them through their children.

Shows are called by that name because they're meant to show people something, not to be mere competitions for awards. The more things they show visitors about livestock and farming in general, the more successful they are.

All the ideas mentioned in this story are being used in some Canadian fair. There are plenty of others that can use them to improve their shows. From the present trend, Canadian fairs are finding a new sense of direction and more of them can be expected to make themselves really important events in the communities they serve.

Use Insects to Fight Insects

Using insects to battle insects is one of the brightest hopes of fruit growers. That is the opinion of A. D. Pickett who, as officer in charge of the Dominion Entomological

Laboratory at Annapolis, N.S., has been running tests to show the effect of sprays on apple pests and the insects that prey on them.

Man has been working against nature, instead of with it, in trying to control insect pests, Mr. Pickett told the annual convention of the Nova Scotia Fruit Growers' Association at Kentville. His tests, which are meant to discover how allies of the fruit grower can be protected, so that they can help in battling enemy insects, showed that some of the sprays commonly used destroyed friend and foe with complete impartiality.

Mr. Pickett criticized current tendencies in insect control. "The general attitude of the majority of growers and research workers has been one of self-sufficiency," he said. "We use every new spray chemical that comes along, and if it creates any new problem we meet this with something else. If this practice is continued we will finally be producing fruit under completely artificial conditions, more or less independent of Nature's whims.

He recommended that more emphasis be put on developing sprays that will control certain insects without having much effect on anything else, instead of continuing exclusively with the shotgun method of trying to kill everything at one shot, thus perpetuating our problems. But until the new sprays are developed farmers will have to continue using the old ones to protect their apple crops.



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Doing A Job on Bossie

Many Eastern Canadian farmers have gained high living standards by streamlining their dairy herds till they are as efficient as modern tractors.

by J. S. Cram

THERE was a time when almost every farmer in Eastern Canada used oxen to plough his fields, haul his grain, and do all the rest of his draft work. They even had to thresh his grain.

That time now seems long past. True, in some sections life is still geared to the plod of oxen, but they're becoming fewer every year. The ox is being pushed out by competition — the competition of the horse which, in turn, seems to be fighting a losing battle against the tractor.

In his struggle for a decent living the farmer is forced to use suitable weapons to protect himself and his family, or they are forced back and back until they are right off the land. And some farming methods which suited the past offer no more protection against today's problems than chain mail would offer against an atomic bomb.

So, much as we may regret his passing, the ox is fading into the past. We ought to be grateful to him for symbolizing so clearly an era that is gone. Some of the other things on our farms that are just as obsolete as the ox aren't nearly as easy to point out. We can identify him at a glance; but we have to do a little detective work to weed out the others.

One of the worst fifth columns on our farms is the low producing cow. She may be a family pet, and the descendant of a long line of family pets; but if she doesn't produce the goods she's acting under false pretences and robbing her owner's family.

Years ago Canadian farmers were offered a detective service designed especially to ferret out these disguised robbers in purebred herds. It was called Record of Performance, and through it a farmer was able to get the low-down on every cow in his herd.

The idea was to weigh each cow's milk every day and test it periodically for butterfat content, so that the farmer had a complete record of how much milk and how



This Quebec Ayrshire, Deschambault Pride 2P, has a consistently good record, leading her R.O.P. classes in 1941, 1943, 1944 and probably 1946 as well.

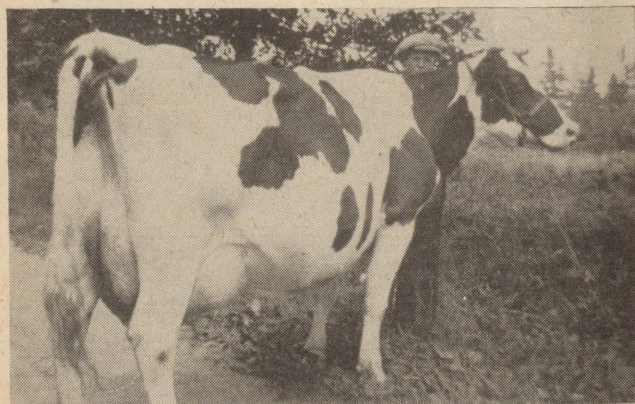
much fat each cow in his herd gave during the year. With everything down in black and white it was easy to see which cows were buckling down on the job, and which ones were merely robbing the feed bins.

This test was divided into two sections. Under the first, or 365 day division, a cow could be tested for the full year. But this put cows that were calving within the year at a disadvantage, so a 305 day division was set up to enable good dairymen to conform with their usual practice of drying cows off a couple of months before they were due to freshen.

All the dairy breed associations got behind this work, and through the years they've encouraged farmers to test their herds. As a result, thousands of innocently-looking feed bandits have been exposed and suitably punished. Freed from this drain on their resources, the farmers have been able to live a lot better.

They found that this detective system did more than help them weed out cows that had been using feed under false pretences. Since it had been learned that milk-producing and fat-producing abilities were passed on from mother to daughters, and through sons to grand-daughters, they were able to find out what cows were their best bets as breeders and concentrate on these blood lines. As a result, records soared high above the amounts required to qualify a cow in R.O.P., and new peaks are constantly being reached as improvement continues.

The benefits of this system are not confined to a few big farmers with high-priced herds. They have seeped through to many small herds, and each year new names are appearing on the lists of breeders whose cows have shown excellent records. R.O.P. breeders are scattered here and there all across the country; and the Maritimes and Quebec have their full quotas of top-notchers. These



This P.E.I. Holstein, Rose Colantha Vale, more than doubled R.O.P. requirements for her class, producing 26,232 lbs. milk and 1,040 lbs. fat in 1946.

people can be identified by the records their cattle make in R.O.P. tests.

In Ayrshires, for example, a cow owned by A. McRae & Sons, Charlottetown, P.E.I., gave 19,221 pounds milk and 818 pounds fat in 1946 — which meant an average of 5 gallons of milk every day in the year. This was far above the minimum Ayrshire R.O.P. requirement of 10,000 pounds milk and 400 pounds fat in the 365 day class for Ayrshire cows.

Even a three-year-old may give a lot of milk. Geo. T. Dagg & Son, Shawville, Que., had one that produced 12,716 pounds milk and 598 pounds fat in 1946, far exceeding her class minimum of 8,967 and 358 pounds.

Consistently high production over the years has been shown by Deschambault Pride 2P, an Ayrshire cow at the Provincial Dairy School, St. Hyacinthe, Que. On 305 day test as a mature cow this season Pride gave 15,482 and 634 pounds, against requirements of 8,500 and 340 pounds. This record promised to make her class leader for Canada for the year — a record she had already achieved in 1941, 1943 and 1944. Pride 2P was the youngest Ayrshire to have achieved a lifetime record of 100,000 pounds milk when she passed that figure in 1945, as a nine-year-old.

John P. Bradley of Lachute, Que., showed unusual results during 1946. At the first of December it looked as if two of his cows would lead their classes for the year, and that a third cow would be second in hers.

In Guernseys J. Eric Hurry of Winsloe, P.E.I., had the high four-year-old for Canada in 1946, with 12,167 and 674 pounds against minimum requirements of 7,000 and 350 pounds. High cow completing a record in November was owned by Geo. W. Tate, Ormstown, Que. She gave 11,842 pounds milk and 630 pounds fat.

A good example of a long-term producer was an 18-year-old Guernsey that qualified in 1946 with a record of 8,819 and 484 pounds, well above the 8,000 and 400 pounds required for mature cows. The oldster that carried her age so well was Lily Buttercup, owned by H. M. Selves, Northfield, N.S.

Holsteins showed some very high records. Top production in the eastern end of Canada was 26,232 and 1,040 pounds — well over double the mature 365-day minimum of 12,000 and 408 pounds. The cow that performed this feat was Rose Colantha Vale, owned by Jas. G. McLean, South West Lot 16, P.E.I.

A world milk record for junior four-year-olds on twice-daily milking went to Vernon K. Harding, Welsford, N.B., when FAVORIT Mercena Blackout gave 24,752 and 951 pounds during the year.

Three records, each well over 22,000 pounds milk and 800 pounds fat, were turned in by cows owned by H. L. Guilbert, Vercheres, Que., under three-times a day milking. And Premier J. Walter Jones of Charlottetown scored when his nine-year-old Abegweit Widow gave 19,597 and 842 pounds on three times-a-day milking.

The 1946 Canadian record for a two-year-old Holstein in both milk and fat went to Elinor Sylvia Fayne Echo,



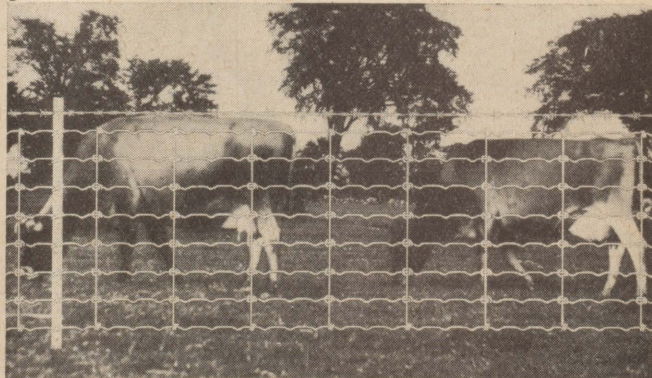
This Jersey that won the grand championship at the Royal for J. L. Dion, Sweetsburg, Que., was bred for high butterfat production as well as for looks.

owned by H. R. Power, Waterville, N.S., on a production of 24,303 and 760 pounds. This is an all-time Canadian second high for milk and fourth for fat in this class.

Jersey breeders in Quebec and the Maritimes had a lot of entries in R.O.P. last year, and struck a very good average, with most of the records made under very ordinary farm care and feeding. An aged cow owned by Henry White & Son, Chatham, N.B., gave 11,543 pounds milk and 679 pounds fat on 365 day test, considerably above the minimum requirement of 8,000 and 400 pounds.

(Continued on page 9)

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Getting Around Feed Shortages

by E. W. Crampton

By following the flexible formula given here it is possible to balance dairy rations, even when some feeds are unavailable.

Dairy cattle meal mixtures which are prepared commercially are restricted by law to 16 percent crude protein. This level has been shown to be adequate for satisfactory feeding practice and it is reasonable to recommend that home mixed rations should likewise be made up at 16 per cent protein rather than at some higher level, especially in view of the critical shortage of such feeds as linseed oilmeal.

Furthermore, feeders cannot yet be assured of continuous supply of any one feed for the whole barn-feeding period. This means that substitution of feedstuffs must sometimes be made, and it is important to see that feeds of similar nature only are exchanged. Also, some feeds may be interchanged only in restricted amounts because of some nutritional peculiarity.

To aid feeders in preparing dairy cow rations under these conditions, the Quebec Provincial Feed Board has prepared a Flexible Formula which shows at once the proportions of basal feeds, protein feeds and minerals which

must be provided in the mixture, and which also indicates the substitutions which may be made between feeds of the same group. Thus from this Master Formula, mixtures may be made up to meet the needs of the cow from what feeds can be secured.

In the formula (given below) it will be noted that the 1,000 pound mixture consists of 780 pounds of basal feeds, 190 pounds of protein feeds and 30 pounds of minerals. The proportions and quantities must be adhered to; however, within the 780 pounds of basal feeds there may be up to 250 pounds of bran or shorts.

In the next two columns are shown the minimum and then the maximum quantities which may be used of the several feedstuffs belonging to each class or group.

For example, all dairy mixtures to be recommended by the Feed Board must contain at least 100 pounds of barley and 50 pounds of oats. They may, however, carry up to 400 pounds of barley or 250 pounds of corn, or 100 pounds of buckwheat, etc., provided that the total of the basal feeds

PATTERN 16% PROTEIN DAIRY COW MEAL MIXTURE

Main Groups	Sub-Groups	Feedstuffs	Proportions of Individual Feeds		
			Minimum	Maximum	Recommended
Basal Feeds 780 lbs.	Grains (530 lbs. min.)	Barley	100	400	250
		Buckwheat	0	100	
		Corn	0	250	
		Hominy Feed	0	250	
		Molasses	0	70	
		Oats	50	350	250
		Rice Feed	0	100	
		Rye	0	100	
		Screenings (No. 1 Feed)	0	150	80
		Wheat	0	300	200
	Mill Feeds (250 lbs. max.)	Bran	0	250	
		Shorts	0	150	
Protein Supplements (190 lbs.)	30-40% protein feeds	Cottonseed meal	0	100	115
		Linseed oilmeal	95	190	
		Soyabean oilmeal	0	100	
		Peanut oilmeal	0	100	
		Sunflower oilmeal	0	100	
	20-30% protein feeds	Corn distillers grains	0	75	50 25
		Gluten feed	0	75	
		Wheat distillers grains	0	75	
		Brewers grains	0	50	
		Malt sprouts	0	50	
Mineral supplements (30 lbs.)	Bone meal* Gr. Limestone Salt Potassium iodide Cobalt Sulfate			19	
				1	
				10	
				0.1 oz.	
				0.6 gms.	
Calculated analysis:			Dig. Crude Protein		14%
			Total Dig. Nutrients		74
			Total Crude Protein		16
			Total Crude Fat		4
			Total Crude Fibre		8

*Each pound of feeding bone meal may be replaced by an equal quantity of defluorinated rock-phosphate or by a mixture of two parts of monocalcium phosphate, plus one part of ground limestone.

adds up to 780 pounds in the half ton mix. Similarly, a choice of protein supplements is given with restrictions as to the maximum and minimum quantities which may be used of each feed, and a fixed total of these feeds at 190 pounds.

No choices are offered for the minerals because there are few substitutes which can be employed.

Some feeders may have the basal feeds available but wish to purchase a commercially prepared "concentrate" as the protein or protein-mineral supplement. In such a case, the total 190 pounds of protein supplements may be replaced by an equal weight of such a concentrate which does not carry the minerals; or the 220 pounds of protein and mineral groups may be replaced by a commercially made Protein-Mineral Dairy Cattle Concentrate.

The substitutions and quantities of the basal feeds, including the mill feeds, which should be mixed with such "concentrates" will be the same as shown in the chart. This is because the total of protein feeds in the Master Formula, used in the possible combinations indicated, make a protein concentrate comparable to any commercially prepared brand.



For maximum production, a balanced diet must be fed.

Doing A Job on Bossie

(Continued from page 7)

A test tube Jersey heifer by a sire at the Yarmouth Artificial Insemination Unit made a senior two-year-old record of 10,568 and 590 pounds, almost double the minimum requirements of 5,750 and 287 pounds. This heifer owned by H. W. MacConnell of Yarmouth, N.S., had the second highest record in her class.

In the 305 day Jersey test A. L. Pope & Sons of Coaticook had an aged cow give 12,747 and 701 pounds, against requirements of 7,200 and 360 pounds. And a Pope junior two-year-old scored with 8,586 and 480 pounds.

Other excellent Jersey records were turned in by L. H. Melville, Chateauguay Heights, Que., W. H. Miner, Granby, Que. Sterling Brown & Sons, Harvey Station, N.B., Jos. Becotte, Becancourt, Que., R. E. Jamieson & Sons, Prince William Station, N.B., J. E. Baker & Sons, River Hebert, N.S. and W. A. Eden, Knowlton, Que.

These are only a few of the fine showings made by

Maritime and Quebec cows in the last year. There are plenty of others almost as good, scattered here and there all over Eastern Canada. And they are all the result of using up-to-date methods to meet present conditions.

Without the years of dairy cattle improvement under R.O.P., many of these records would never have been possible. It was testing that enabled farmers to discover, without any guesswork, which of their cows were good milkers; and to discover, also, where they could find bulls from high-producing stock to further improve their herds.

If, by some fluke, even one of these cows had been produced without testing, not even the owner would have known how good she was. He might have bragged about a wonderful milker he had, but few people would have believed him.

Today these R.O.P. records, which are carefully checked by Dominion Government inspectors to make sure they are accurate, are the best advertising any herd has. When sky-high prices are paid for dairy stock they aren't for looks, but because the records behind the cattle show that their progeny should deliver the goods.

Luckily, we don't need to pay five-figure prices for cattle to reap the benefits of testing. Production-backed bulls are gradually replacing others in purebred herds, and their calves are going out to improve other herds. Thus good blood lines are gradually being spread.

But the process is slow. After reading the high records made this year it's hard to believe that the average production for all cows in Canada is estimated at less than 4,500 pounds milk and 160 pounds butterfat. This means that there are still a lot of herds back at the oxcart stage of progress.

If the owners of these poor-paying herds realized that two really good cows would give as much milk and fat as their 10 to 12 scrubs they wouldn't take long to switch. But they don't realize this; and they won't till they start testing.

Then they'll find that for years they've been throwing away three-quarters of their feed and labour, and they'll soon get rid of the feed robbers, replacing them with good milkers.

Our Cover Picture

Known to College authorities as "East Campus Apartments", the settlement shown on the cover this month is popularly known as "Diaper Dell." They are the apartments where sixty married students and their families are living.

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STEREOTYPERS

The Land We Live On— How Plant Food is Produced

by W. A. DeLong

SOIL is a loose, partly decayed layer of material covering the tillable land areas of the earth. From this layer most of the food of all plant and animal life is drawn directly or indirectly. The fertility of soil and its ability to produce crops are thus vital to our existence.

Soil is made up of three main kinds of materials—solid particles, soil air, and soil solution. Soil air differs from ordinary air in two important ways; it contains more moisture and much more carbon dioxide, which assist in dissolving plant food. Soil solution gathers up growth-producing materials from the soil and delivers them to plant rootlets.

The greater part of ordinary soils is made up of finely divided and partly decayed rock. The forces which break this rock up and cause it to decay are chiefly climatic, the most important to us being frost and water. Water collects in cracks and crevices of rocks and when it freezes the rock is gradually shattered into small fragments.

The particles thus produced are further acted upon by water. They are carried from place to place by running water, battered about and further broken down in a process known as erosion. Water may also reduce the size of frost-formed particles by dissolving them, as in the case of limestone. Rock materials are also changed into new forms by combination with water and by decomposition by water.

When the soil lies directly over the rock from which it was formed it is called residual. When the materials have been moved some distance before being converted into soil it is known as transported soil. Many Quebec soils are of the transported type, having been formed from rock which was ground up and moved from place to place by the action of glaciers which covered this country thousands of years ago. This ground-up material has since been moved about and sorted into different sizes by the action of water.

From the original rock particles the soil gets three types of minerals — primary, secondary, and plant food elements. Unchanged fragments of the original rock such as sand grains, are primary minerals. When these are acted on by water or other agencies they are changed into another form — secondary minerals. And at this or a later stage they release plant food elements.

Thus when feldspar, a primary mineral, is decomposed by water it slowly changes into clay, which is a secondary mineral; and it releases potassium, a plant food element.

Two other important plant food elements are phosphorous and calcium. The three are the essential parts of the substances called potash, phosphoric acid and lime.

How Soil Differs from Rock

But soil is vastly different from even the most finely-ground rock. This is due to the fact that it also contains two kinds of organic substances — living and dead. Among the common living organisms we find worms, bacteria and fungi. The dead organic material consists of plant fragments and of material originating in plants but which no

How good a living a farm can provide, over the years and generations, depends on how well the soil is handled. That, in turn, depends on how much those who farm it know about the materials in the soil, and the forces that work on them to produce plant food.

To augment these materials and control the forces that work on them is the basic task of the farmer. That task is much simpler when we understand everything involved.

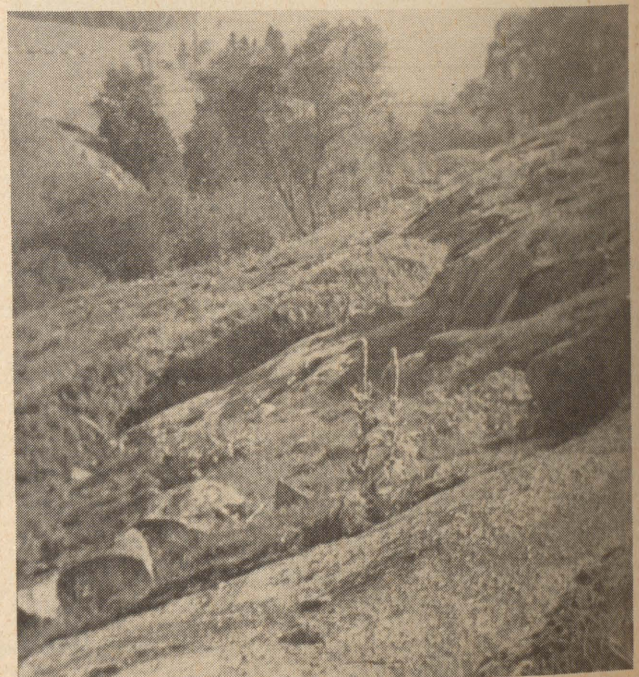
The article on this page is the first in a series describing how soil is made and how it works.

longer shows its original form and structure. The material that has changed in structure is what we know as humus.

Humus and clay differ considerably from other soil materials, in that they are jelly-like. They have the power to take up water and swell, or to give it up and shrink. Although humus can hold more water than clay, clay is the stickier of the two.

The two properties of stickiness and volume change on wetting or drying lead to the formation of crumbs of soil. Crumb formation increases the size of the spaces between the soil particles, thus assisting the movement of soil air, and makes tillage easier.

Humus and clay also possess the extremely important ability to take up plant food elements from the soil solution and hold them in reserve for the use of plants. In very sandy soil, low in humus and clay, the loss of dissolved



Frost and water break up rocks, in the early stages of soil formation. Then other forces go to work.

plant food may be much greater than from soils containing more of these materials.

When a soil carries enough lime and active humus crumb formation takes place readily. But in acid soil, which is low in lime, crumb structure tends to break down and the rich surface soil is likely to wash away.

Thus the soil consists of a framework of mineral matter, upon which and within which the many changes necessary for continued fertility and plant growth take place. These changes are brought about by the active or dynamic portion of the soil, which is made up of the jelly-like substances, clay and humus, and the living organisms such as worms, fungi and bacteria.

Manufacturing Plant Food

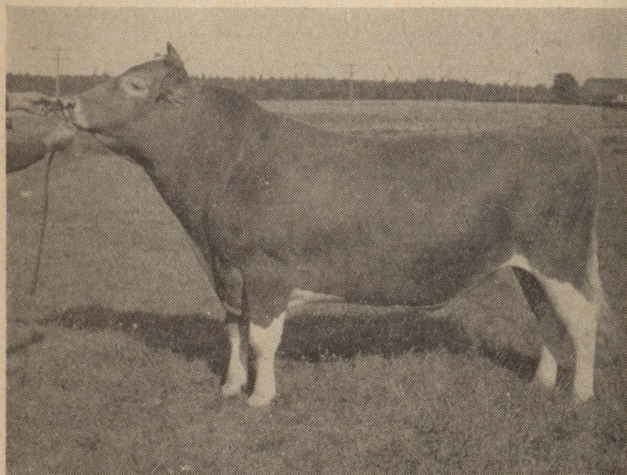
A single ounce of good soil may contain as many as a billion bacteria, which convert plant fragments into humus. At the same time they liberate carbon dioxide, which assists in further breaking down primary minerals. Certain types of bacteria also convert the nitrogen of plant residues to a form which plants can readily use. So soil bacteria are very good friends of the farmer.

Where soil is very acid bacteria do not thrive, and the job of decomposing plant residues may be taken over by fungi. But humus thus produced is a less valuable form than that made by bacteria.

Of the large soil organisms earthworms are the most important. They grind plant fragments and distribute them throughout the soil. But where soil is low in calcium earthworms are scarce, so organic matter is not so evenly distributed as in non-acid soils.

So the value of lime is very evident. By adding lime to acid soils we can encourage the even distribution of organic matter by earthworms, the formation of humus and its processing by bacteria, to provide a ready supply of food for plants.

The next article in this series will describe different kinds of soils and tell of their best uses.

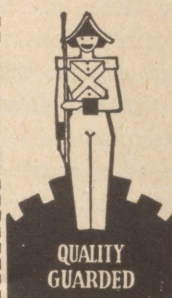


This Guernsey bull is expected to sire high-producing daughters because there are many good R.O.P. records close up in his pedigree, including several for his dam.

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Egg Shell Quality Needs Attention

by N. Nikolaiczuk

THE poultryman and farmer know only too well that a "crack" sells at a marked discount despite good size and interior quality. This is a direct loss to the producer, but substantially more revenue is lost to the poultry industry as a whole as the result of egg shell breakage throughout the various channels of trade. The latter must eventually be charged against the price which is offered to the producer for his eggs.

We have recently entered into long-term agreements for the heavy exportation of shell eggs to Great Britain. The handling, packing and shipping to this market are a severe test of shell quality. Reports compiled by marketing officials indicate that one dozen in every thirty-dozen case has been broken on the way to overseas markets. Recent discussions with leading British poultrymen confirm these findings, and as these authorities declare that Danish and Canadian eggs have poor shell quality as compared with eggs imported to the British Isles from other countries, it is apparent, therefore, that in the attainment of all-round egg quality, shell strength cannot be neglected.

Defective shells, lacking in quality, can be recognized by their appearance. The most common forms are thin and fragile. These will withstand only limited shock and hence may be expected to yield an excessive proportion of cracks and unsaleable eggs. Porous rough shells, which have a sandy appearance, are likewise of poor quality. In addition to low breaking strength, this porosity allows excessive evaporation of moisture from the albumen of the egg during storage. The enlarged air cell which results will cause such eggs to be graded down, since this is one criterion of low interior quality. Some shells are glossy, with a characteristic brittleness, and a mottled appearance. Finally, a small proportion of all eggs laid possess poorly-formed weak ends. This simple descriptive classification will permit even the inexperienced poultryman to recognize and cull market eggs for faulty shells.

What Research has Shown

Research workers have been aware of the egg shell quality problem and have studied some of the factors which contribute to it.

Selection of breeding stock for good shell quality has been shown to be possible. Results from experiments conducted by workers of the United States Department of Agriculture demonstrate that breeding hens can be separated into good and poor shell lines. When selection was carried on for a period of seven years on this basis, a significant improvement in shell quality was obtained and most of this improvement was gained in the first three years. This information is of particular value to the poultry breeder. Since shell quality and air cell size upon incubation are closely related, the above workers suggest that air cell size at the 14th day of incubation, when all other factors

have been equalized, should be used as a guide in shell quality evaluation. The large air cell at this stage of incubation is associated with poor shell quality, including such defects as porosity and low breaking strength. Hatchability did not appear to be related to these differences in air cell size.

The effect of season cannot be disregarded. The onset of summer heat interferes with the utilization of the element calcium, which is a basic mineral in shell formation. Kennard of the Ohio Agricultural Experiment Station presents the following data under their conditions with oyster shell as the calcium supplement:

<i>Date of Test</i>	<i>Per Cent Egg Breakage</i>
December	16
January	2
February	9
March	16
April	14
May	39
July	49
August	42

From this table it is seen that summer-laid eggs possess poor shell quality, and the expectation may be that such eggs will undergo more loss through breakage in the course of marketing.

Numerous experiments can be quoted to demonstrate the need for calcium supplements by laying birds. Whether as shell products or limestone, a liberal supply of some source of calcium carbonate should be fed to birds before the commencement of egg production and continuously thereafter. The free-choice method of hopper feeding has proved the most satisfactory to date, because it permits each bird to adjust consumption to its requirements based on the rate of production. Recent experiments conducted by Kennard prove that failure to feed calcium supplements will cause a decline in shell quality more pronounced than that produced by feeding insufficient vitamin D. However, the latter is also required for the proper utilization of calcium and must be supplied at a suitable level in the ration.

Finally, the observation has been made that shell quality in hen eggs is superior to that of pullet eggs. The recent trend, however, is strongly toward pullet flocks for egg production. This operates adversely against the maintenance of high shell quality in Canadian eggs.

A Course of Action

Efficiency in the production and marketing of Canadian eggs is essential to the maintenance of our poultry industry on a profitable level. Shell quality is but one phase. Research has shown how improvement can be made. Careful classification of market eggs during all seasons of the year, selection of breeding stock on the basis of shell quality, and good feeding practice in laying pens offer the best solution to the problem of shell quality.



DEPARTMENT OF AGRICULTURE

*Activities, Plans and Policies of the Quebec
Department of Agriculture*

1947 Farm Programme Drafted

Sitting down together to draft a national farm program for 1947, men from every province in Canada showed how easy it is to iron out big problems when everyone co-operates. The scene was the Dominion-Provincial Agricultural Conference in Ottawa; and the personnel included official representatives of the dominion and nine provincial departments of agriculture, and directors of the Canadian Federation of Agriculture. Closely following proceedings but taking no active part unless they were asked direct questions were other representatives of government and of industry, and observers from the United Kingdom and the United States.

Hon. Laurent Barré Minister of Agriculture for Quebec, struck the keynote when he said that a national program was needed, so that every part of Canada could specialize in what it could grow cheapest and best. Everyone agreed with this viewpoint, and went to work to produce such a program.

The conference first tackled the problem of agricultural production as a whole, deciding what would be required to meet domestic needs and export contracts and what it would be possible to produce. Then it discussed ways of encouraging farmers to make the changes recommended.

The results of the main discussion were summed up at the end of the conference by Hon. J. G. Gardiner, Dominion Minister of Agriculture, in these recommendations:

"That an effort should be made to increase production of livestock and dairy products and to maintain present production of poultry and eggs; and

"That if livestock production is to be increased and wheat made available for human consumption, barley acreage must be increased;

"That if a storage of oats is to be maintained against possible short crop to assure feeding present livestock population through our long winters, oat acreage should be increased;

"That if barley and oat acreage is to be increased it can be most effectively brought about in Western Canada by reducing wheat acreage;

"That if this is the goal it can only be brought about, particularly in barley, by making the return from barley comparable with the return per acre from wheat.

"The conference is of the opinion that the return on barley could be assured, and hence the increased acreage

desired by making an acreage payment to farmers producing barley in the western provinces.

"The conference is of the opinion that if an acreage payment is made in the western provinces the 15-cent premium should be removed in the west and the payment of freight to the eastern provinces and British Columbia continued.

"The conference is of the opinion that, with this increase in the production of barley provided for, provision should be made to encourage greater production of hogs and milk, and particularly milk utilized for the production of butter and cheese.

"It was contended that to encourage livestock products, particularly dairy products, an increase in oil cake supply is necessary. If this is to be accomplished there must be an increase in flax seed production in the west. It is the opinion of the conference this can only be brought about by increasing the return for flax."

In addition many other subjects were discussed — subjects of vital interest to many farmers in Quebec and the Maritimes. In each case the attack was the same — deciding on the goal, finding out which provinces were best adapted to supplying the requirements, and then figuring out just how to get the production.

Quebec was the only province with 1946 hog production higher than the 1945 level, while there were recessions in all other provinces and Nova Scotia dropped to less than half. With an export price of \$29 per 100 pounds of bacon at seaboard in 1947 the goal is a 20 percent increase in every province.

Prospects for beef, too, are good for 1947, with an



Dr. George Maheux, Director of Information and Research and the Hon. Laurent Barré, Minister of Agriculture, discuss a point with Mr. P. D. McArthur, at the Ottawa Production Conference.

export contract calling for at least 120 million pounds of carcass beef at prices ranging from \$19.20 to \$24.25 per 100 pounds, according to grade, at Canadian seaboard and an assured market for any additional amount at the same prices.

Quebec beef marketings dropped 17 percent in 1946, while New Brunswick gained almost 50 percent and all other provinces except Saskatchewan showed a slight drop. The conference decided to ask farmers to hold their beef cattle marketings at 1946 levels.

In veal calves Quebec and the Maritime provinces showed a considerable increase in slaughterings, the number more than doubling in Nova Scotia. It was decided that calf slaughterings should be as heavy or heavier in 1947.

Sheep and lamb slaughterings also showed a slight gain in all Eastern Provinces except Nova Scotia, where there was a 16 percent drop. There is an assured market this year for all the lamb and mutton that Canada can produce. However, it was decided to ask for a 10 percent decrease in 1947 marketings of sheep and lambs, and a 5 percent decrease in wool.

The dairy products situation is rather complicated. Milk production dropped 4 percent and fluid milk sales increased almost 9 percent, putting a squeeze on butter and cheese, both of which dropped in every province. To meet 1947 needs, an increase of six percent in total milk production was requested. Besides allowing for the domestic market, this will permit an increase of 9 percent in creamery butter, 31 percent in cheddar cheese, and 104 in evaporated whole milk.

With 1946 hatchings reaching 83 million chicks, compared to 62 million in 1945, egg production this year will probably reach 378 million dozen. This should enable us to take care of our export contracts for 83 million dozen eggs, as well as supply Canadian needs. Thus each province is expected to produce 10 percent more eggs

than last year. Prospects for poultry meat are also good, and markets seem assured for the extra meat that will be produced as a by-product of the increased egg production.

The biggest problem in getting the required production of livestock and poultry products is to ensure enough feed. The method the conference recommended to get the barley has already been covered. The other bottleneck that has to be removed is the shortage of protein feeds.

The conference decided that the best way to get the required supply of protein feeds was to increase the acreage of sunflower seed by 35 percent and flax seed by 40 percent, to use processing capacity to the limit and produce large amounts of sunflower seed meal and linseed oil meal. It also decided that it would be wise to hold soybean production at 1946 levels.

It was pointed out that there has been a considerable shift of coarse grain acreage to grass and other crops in Eastern Canada since the freight assistance policy has been in operation, and that Eastern producers who plan to continue raising livestock and poultry will find it necessary to produce more of their own feed grains within the next few years. To fit into this picture Quebec and Maritime farmers need to increase oat acreage by 9 percent and mixed grains by four percent.

The conference also suggested that grass and legume acreages be held at about present levels, but that alfalfa might be used to replace other hay and pasture crops, thus increasing feed value from the same acreage.

Apple production was expected to increase by 36 percent in Quebec this year, if conditions are at all normal, but Nova Scotia production is expected to drop about 7 percent. Over all Canada the probable crop for this year is estimated at 17,000,000 bushels, 97 percent of 1946.

A good strawberry season is anticipated, with a 15 percent increase in Quebec and 27 percent in Nova Scotia. Prospects look good for all the berries that can be grown.

A potato marketing problem arose in 1946 out of a big



Dr. A. M. Shaw, chairman of the Dominion-Provincial Agricultural Conference, asks provincial delegates for their suggestions on how to get the needed feed grain.

crop both here and in the U.S.A. As a result, potatoes were the first crop for which action was asked from the Agricultural Prices Support Board. Since most of the surplus was in the Maritimes the Board has made provision for removing some of it for processing into starch, to provide a floor price under table potatoes in the spring, and to assist in securing export markets in South America. A slight reduction in potato acreage is asked for 1947.

Marketing of canning crops has reverted to bargaining between growers and processors. The bean acreage increased 30 percent in Quebec and 50 percent in the Maritimes, and the conference suggested that acreage, be held at these levels.

Quebec also went heavily into peas last year, planting 50 percent more acreage than in 1945, and the Maritimes showed a gain of about 50 percent. It was recommended that acreage be cut 15 percent in 1947, and that growers concentrate on producing better peas to reach the export standard.

While there was a general reduction in tomato acreage, Quebec showed a 28 percent increase. Here, too it was suggested that acreage be cut — by 7 percent — and that growers concentrate on producing a better crop.

With demand for tobacco excellent, a 6 percent increase is asked in the acreage of flue-cured tobacco. Most of the cigar and pipe tobacco, for which prospects are also good, are grown in Quebec. In cigar tobacco a 19 percent increase is asked, and in pipe tobacco an 11 percent increase.

There seems to be a possibility that sugar rationing may be relaxed in 1947. If this is the case honey will not be in such a favourable position as during the war. So it is recommended that colonies be held at their 1946 level which, if conditions are favourable, would result in considerably greater production.

Maple syrup production jumped one-third last year,

most of it coming from Quebec. A further increase of 28 percent is asked for 1947, to meet a demand that has been far from satisfied for years.

Quebec has a sugar beet refining capacity for over four times its 1946 production from 2,300 acres. It was recommended that production be increased by 335 percent, to make full use of processing equipment.

Quebec production of fibre flax dropped one-third from 1945. To increase production to the point where mills can operate at full capacity and make this a more profitable crop, Quebec needs a 33 percent increase in acreage.

Quebec and the Maritimes have never been big producers of legume seeds, which have been very profitable to farmers further west, and there is also room for considerable expansion in grass seeds. Supplies in many lines are not nearly enough to meet the needs.

In alfalfa seed a 56 percent increase is asked; in alsike clover 71 percent; red clover 13 percent; timothy 12 percent; Kentucky blue grass 316 percent; meadow grass 34 percent; and orchard grass 128 percent.

The vegetable and root seed situation has changed entirely during the last year. During the war, Canada tried to grow the seeds normally imported from Europe, and Quebec built up quite a sizeable industry. But now some European countries are again in a position to supply seed, and the conference recommended that Canadians produce only the amounts for which they can secure definite contracts.

At the end, after a statement from the chief of each delegation, Mr. Gardiner impressed on those present the fact that although he agreed generally with the conference's recommendations, they were still only recommendations, and would have to be passed upon by the Dominion Government before they could become Canada's official program for the year.

Final Figures on Quebec Sugar Production

During the season just finished the St. Hilaire Sugar Refinery processed 18,000 tons of sugar beets, which gave a gross return to growers of \$216,000. Sugar beets were grown on 2,096 acres and the average yield of 8.58 tons per acre, taking into consideration dry weather which occurred just at the most critical stage of the growing season, is considered excellent. The total crop harvested in 1946 was twice the size of the 1945 crop, and this year's production, per acre compares favourably with the 1945 figure of 7.8 tons.

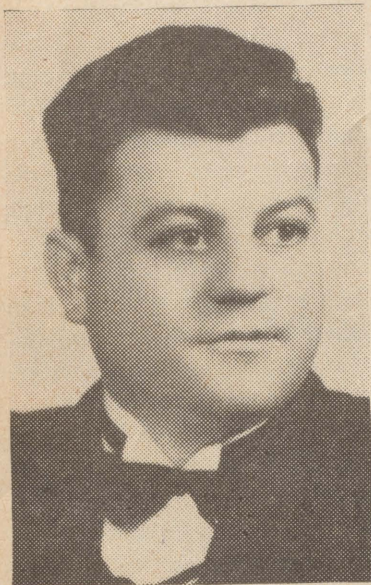
The production conference at Ottawa last month stressed the importance of increasing the production of beet sugar in Canada with the least possible delay. Ontario hopes to plant 40,000 acres of sugar beets, Manitoba 14,000, Alberta 31,000. Quebec has been asked to plant 10,000 acres, which is a great jump from this year's produc-

tion, but which is the figure which it was thought should be planted to keep the refinery running at full capacity. There is apparently a move toward sugar beet planting underway for next year: a great numbers of farmers have summer-fallowed a piece of ground to get it ready for beets, and all signs point to a heavier harvest of sugar beets in 1947 than ever before.

The guaranteed price for beets for 1947 is \$12.00 per ton, and farmers may arrange next year's contracts at any time. The officials of the refinery are anxious to get all production details for the 1947 season arranged as early as possible, so that distribution of seed and of machinery may be made early enough in the spring so that no grower will be held up for lack of supplies.

A school boy was asked to define the word "agriculture". "Well," he said, "agriculture is something like farming, only farming is doing it."

Pierre Labrecque Is New Chief of the Animal Husbandry Service



Pierre Labrecque, M.Sc.

The position of Chief of the Animal Husbandry Service in the provincial Department of Agriculture, left vacant by the death a year ago of Raoul Dionne, has been filled by the appointment of Pierre Labrecque, M.Sc. An earlier announcement that the post would be filled by Adrien Martin was premature, since illness prevented Mr. Martin from assuming his duties in this post.

Mr. Labrecque has been with the Department since 1933, joining the Animal Husbandry Service on graduation with the Master of Science degree from Iowa State College of Agriculture in that year. He took his B.S.A. at Ste. Anne de la Pocatiere. His work in the Department has had to do with horse breeding and raising, and he has acted as judge at the exhibitions at Quebec and Toronto. He is a professor on the staff of Ste. Anne de la Pocatiere, is secretary of the Percheron Breeders' Association, a member of the Corporation of Agronomes and a number of other breeders' societies. A farmers' son (he comes from St. Nere in Bellechasse county) who has had advanced training in animal work, he comes to his new position well prepared to cope with the problems with which he will be confronted.

Quebec Winners in the National Barley Contest Announced

Judging in the Quebec division of the \$25,000 National Barley Contest has been completed and the names of the winners in the various counties have been released. Eight cash prizes were competed for in each of twelve barley growing regions in the province, making a total of 69 prizes. The value of the prizes in each county are as follows: 1st prize, \$75; 2nd prize, \$50; 3rd prize, \$25. The other five prizes are of \$10. each, making a total of \$200. per county.

Growers placing first, second and third in the various counties are as follows:

Vaudreuil-Soulanges: J. E. Bissonnette, Les Cedres; Charles Vinet, Vaudreuil; Gerard Faubert, Rigaud.

Chambly-Vercheres: Armand Fortier, Chambly; G. E. Palardy, St. Bruno; P. E. Bernard, Beloeil.

Jacques-Cartier-Laval: Eugene Joly, St. Vincent de Paul; Lionel Ouimet, Ste. Rose; P. Clermont, St. Martin.

Argenteuil-Two Mountains-Terrebonne: Seminaire Ste. Therese, Ste. Therese; Emile Robillard, St. Andre; Clifford Oswald, St. Augustin.

L'Assomption: J. E. Forest, l'Assomption; E. Desnoyers, l'Assomption; Gaston Thiffault, Repentigny.

Hull-Gatineau-Pontiac: L. A. Smart, Shawville, Charles J. Tener, Shawville, W. Lennis Barr, Shawville.

Bagot-St. Hyacinthe: Rene Belisle, Precieux-Sang; Paul Emile Cote, St. Thomas d'Aquin; Donat Rivard, St. Simon.

Berthier-Joliette-Montcalm: Pierre Tellier; J. P. Lapointe, St. Jacques; Azehus Lavallee, Berthierville.

Beauharnois-Chateauguay-Huntingdon-Napierville: Donal Meloche, St. Louis de Gonzague; A. Beaulieu, Ste. Martine; Armand Primeau, Ste. Martine.

Mississiquoi-St. Jean-Iberville: C. A. Deland, l'Acadie; Wilfrid Clermont, St. Luc; Jean Gregoire, St. Valentin.

Drummond-Nicolet-Yamaska: Antonio Descoteaux, Ste. Monique; Rosarie Breault, St. Edmond; Aime Lamothe, St. Celestin.

Rouville-Shefford: Joseph Lacasse, St. Joachim; Rosario Bourrassa, Ste. Anne de Stukely; Leonide Davignon, Richelieu.

Regional winners compete in the Provincial contest this month, at which time five contestants will be selected for the interprovincial contest between Ontario and Quebec which will be held at Toronto early in February.

The National Barley Contest is sponsored by the brewing and malting industries of Canada to encourage the growing of improved quality seed and malting barley.

Quebec Cheesemakers Do Well at Belleville

Some twenty of Quebec's best cheesemakers sent samples of their products to the annual British Empire Cheese Show at Belleville last month and, in competition with other provinces across Canada, more than held their own.

In Class II, open to all provinces except Ontario, in the class for white September cheese, the first seven places went to Quebec entries and the first six went to Quebec in the class for October cheese. In each case Gabriel Lamoureux, the cheesemaker at the St. Hyacinthe Dairy School, had the highest score. He won the J. O. Leclaire cup and also the Co-operative Federee trophy.

Blueberry Crop and Price Down in 1946

The commercial blueberry crop dropped over 30% in 1946 when compared with the record crop in 1945, but it was still eight million pounds bigger in 1946 than it was in 1944. The Lake St. John-Chicoutimi district is still the important centre of production and supplies about two thirds of the total crop for the province. Abitibi-Temiscamingue comes second, producing around three million pounds or about 21% of the total. Next in order of production come the districts of Charlevoix-Saguenay and Lower St. Lawrence-Gaspesia.



CO-OPERATION AND MARKETING

A page of interest to members of farmers' co-operatives

Farm Woodlots Can Pay the Co-op Way

HOW A FORESTRY CO-OPERATIVE MADE FARM WOODLOTS PAY FOR
1000 FARMERS OF NORTHERN NEW YORK STATE

Here is the story of how a state government's interest in conserving its forests met the farmer's desire to add to his income. The result was a scientific conservation programme in conjunction with a co-operative saw mill, — a project which paid dividends to both.

Northern New York State is like a lot of country on the Canadian side of the Border. Fields and forests alternate over the rolling landscape. Most farms include a woodlot made up chiefly of hardwood trees.

As a result of 150 years of forest exploitation and the virtual disappearance of forest industries in the settled areas the belief is prevalent that woodlands can no longer make a significant contribution to rural living.

It is true that economic pressure on the poorer farms has often led to over-cutting and neglect so that long years of forest restoration must elapse before substantial cash income can again be realized. Furthermore, as fuel requirements for home use generally consume the equivalent of the annual growth of 15 acres, many farmers with small woodland holdings feel that they "haven't enough timber to bother with" and are satisfied if they can obtain the fuel-wood they needed from the farm woodlot.

Wherever forest surveys have been made, however, another and brighter picture has been presented. It has been shown that even in small woodlots some good merchantable timber is still available, that proper management will increase the size of the annual cut possible and that proper care can re-establish woodlots—not as a major part—but as an important contributing item to farm income. Such a survey made in Otsego County in New York State in 1941 showed that good woodlots were furnishing dairy farmers with as high as 23% of their net income. Since much of the work in the woods is done when available labour and equipment are not needed elsewhere the increase represents an attractive gain.

The Otsego Forestry Co-op

Local interest in forestry stimulated by critical needs arising from the depression resulted in the organization of



Modern processing plant of the Otsego Forest Products Co-operative Association, near Cooperstown, N.Y., provides ready market for a wide range of farm woodland products in whatever quantity offered.



This abandoned farmstead represents a loss to the entire community as well as to the owner. Planting of forest trees is often the best method of restoring such lands to productive use.

the Otsego Forest Products Co-operative Association at Cooperstown, N.Y., in 1935.

The two objectives of co-operation and conservation were combined in this organization. The members from the beginning were anxious to preserve the forests as a natural resource of value in itself as well as necessary to successful agriculture. Because of this desire they were able even in lean years to resist the temptation to overcrop their woodlots.

A good history of co-operatives in this district made it easy for the farmers to co-operate in the cutting, milling and marketing of their wood products. Almost every farmer was already a member of a dairy co-operative.

The Bureau of Agricultural Economics and the Forest Service of the U.S. Department of Agriculture were glad to take the opportunity offered to make skilled assistance available and an almost ideal relation has existed between the Forestry experimental station and the co-operative from the beginning. A representative of the Federal Forest Service supervised the cruising of the woodlots. Two field men of the co-operative promoted the membership and made the logging contracts.

In 1937 the association received a loan from the Farm Security Administration for the purpose of building and operating a farmer-owned wood processing plant. Since that time the association has afforded farmers within a radius of 25 miles an opportunity to practice forestry in conjunction with their usual farming on a basis that assures an equitable return from any species

and grade of product in whatever quantity offered.

By 1941 the association had a membership of over 600 and in that year manufactured over 2,700,000 board feet of lumber. A vigorous educational programme has seen to it that all trees cut are selected and marked under sound forestry principles. The woodlots are cruised completely. Trees 14 inches and over in size are marked; smaller ones are counted. Some weeding of beech, elm and red maple is done. Basswood, ash and hard maple are encouraged. Member owners are instructed in the care of the woodlots and are required to prevent cattle from grazing in them.

The association has now 1004 members of whom 900 are active. Common stock in the association may be held only by owners of woodlots. 30% of the present output of the mill is sold back to the members at wholesale as finished lumber. Approximately 100 woodlots are cut each year.

The mill crew of 45 includes the field men and the logging crew. The men who work in the mill alternate on their jobs, doing three days sawing — and three days piling, loading, etc. During the war years when farm labour was scarce an increasing amount of the logging had

"JOE BEAVER"

By Ed Nofziger



Forest Service, U. S. Department of Agriculture

"SORRY SISTER — NO GRAZING HERE ! WE KEEP COWS OUT OF WOODLOTS FOR THE SAME REASON THEY KEEP BULLS OUT OF CHINA SHOPS !"

to be done by the association. The farmers paid for the logging cost but the men worked for the mill.

Specialized markets are now being developed. The straight-grained white maple is made into shuttle-locks for the textile industry and brings a high return.

At present also, a reorganization is taking place to make the association a true co-operative. The government debt is being written or paid off. After nearly ten years of successful operation the experiment in conservation has been justified — and an example of co-operation in producing and marketing forestry products has been established.

Frampton Shipped Christmas Turkeys

Most of the turkeys bought for Christmas and New Year's dinners by housewives in Quebec City came from Frampton, where 100,000 pounds of turkeys, 33% of them grading "special" and 50% grading "A", were raised for disposal on the Quebec market.

At the Frampton centre there are 53 turkey raisers and this year they were joined by 16 producers from near-by St. Leon de Standon who had 45,000 pounds to dispose of.

Turkey raising is steadily growing in popularity in this part of Canada, and it is estimated that about three million pounds will represent the total production of this province this year. This is a 500,000 pound increase over last year, but even so Quebec is a long way from supplying all the demand that exists for quality turkeys: Western Canada is still the chief source of supply. But at least another centre of turkey raising will be organized next spring at St. Odilon de Cramborne, and several hatcheries are increasing their incubator space to be ready for a strong demand for day-old turkey chicks.

The Canada Year Book

The 1946 edition of the Canada Year Book is now ready for distribution and may be obtained by writing to the King's Printer, Ottawa, Ont., enclosing \$2.00

This volume had its start in the early years of Confederation and for more than seventy-five years it has interpreted the economic growth of the Dominion — its periods of prosperity and its reverses.

In addition to the statistical material which it includes, there will be found in the present edition a number of special articles which contain information of interest to all readers. Among these are the story of the Commonwealth Air Training Plan a summary of the part played in the war by the R.C.A.F., the report of the Royal Commission on Co-operatives, an article on Canadian agriculture during the transition period, and a full description of Canadian agriculture during the war years and the post-war period.

Market Comments

The first estimate of the value of field crops of 1946 is now available. The total is \$1,238,645,000. This is slightly more than one hundred million above the value of field crops of 1945. This increase is due chiefly to higher yields of grain in the western provinces.

In the eastern provinces the value of field crops is lower than that of last year. This is largely due to lower yields of hay in 1946 than in the previous year.

While all five eastern provinces report declines, the amount of decline varied greatly. Ontario reports a decline in value of only one-fifth of one per cent. In Nova Scotia the decline was 12 and in Quebec 16 percent. In Prince Edward Island the decrease was 19 percent and in New Brunswick 25.

This breakdown indicates that there was something else besides hay entering the calculation. There was also potatoes.

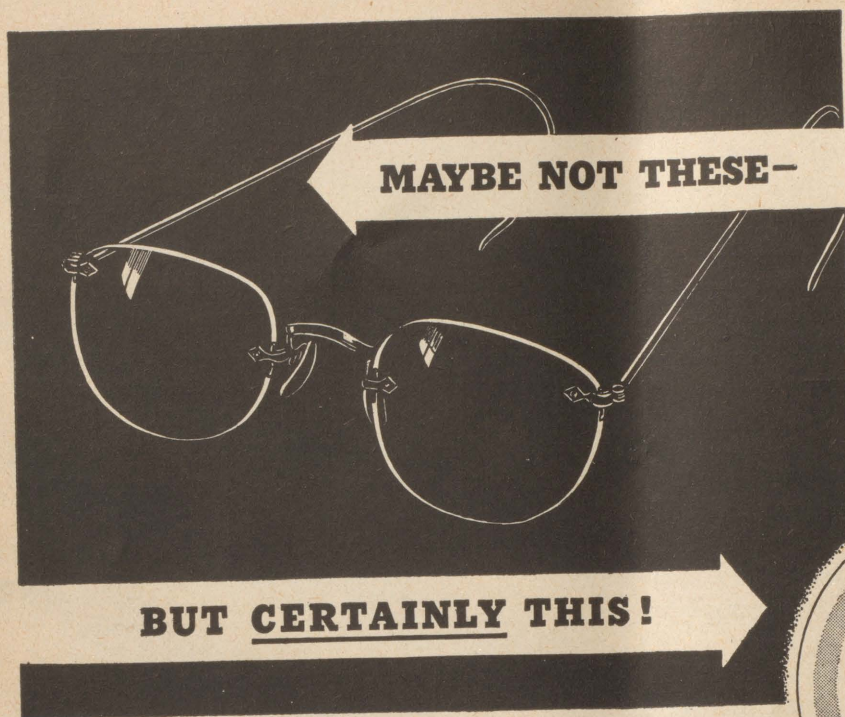
The potato crop of 48 million cwt., is valued at \$75 million in round numbers as compared with the 36 million cwt. of 1945 which was valued at \$81 million.

In the province of Quebec the field crop value is estimated this year at \$132 million in round numbers as contrasted with \$158 million in 1945. This drop was due largely to lighter hay crop but grain and potatoes contributed also to the decline.

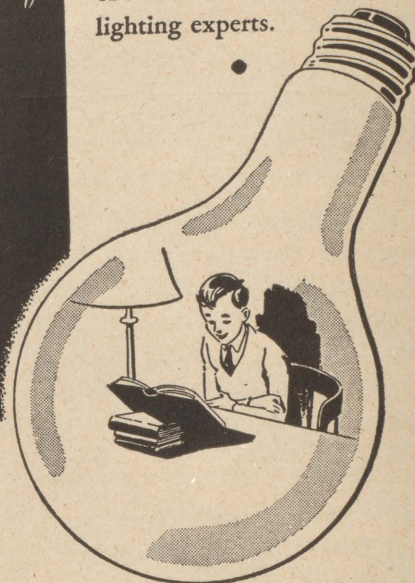
The feed situation is unhappy. The oat supply is not so serious but barley is hard to get. Proposals for the coming season include a drive to increase barley production.

Trend of Prices

	November 1945	November 1946	December 1946
LIVE STOCK:	\$	\$	\$
Steers, good, per cwt.	11.50	12.67	12.36
Cows, good, per cwt.	8.40	9.58	9.93
Cows, common, per cwt.	6.95	7.57	7.73
Canners and Cutters, per cwt.	5.40	6.19	6.80
Veal, good and choice, per cwt.	14.50	15.62	16.00
Veal, common, per cwt.	11.40	13.05	14.08
Lambs, good, per cwt.	14.13	14.45	15.15
Lambs, common, per cwt.	11.18	9.63	9.68
Bacon hogs, dressed, B1, per cwt.	17.75	20.20	21.03
ANIMAL PRODUCTS:			
Butter, per lb.	0.36	0.41	0.42
Cheese, per lb.	0.22	0.23	0.23
Eggs, Grade A, large, Per Dozen	0.50	0.48	0.41
Chickens, Live, 5 lbs. plus, per lb.	0.27½	0.26	0.27
Chickens, Dressed, Milk- Fed, A., per lb.	0.34½	0.34	0.35
FRUITS AND VEGETABLES:			
Apples, B.C. McIntosh, Fancy, per box	3.62	3.75	3.75
Potatoes, Quebec No. 1, per 75 lb. Bag	1.80	1.15-1.20	1.15-1.20
FEED:			
Bran, per ton	29.00	29.00	29.00



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Strippings

by Gordon W. Geddes

The second Fourth Night of the season saw an even larger gathering in Stanstead County than the first. It was held in the Ways Mills hall and was open to the whole county. Some of the more distant forums were not represented but six were and there were also some visitors. The six forums were Hatley, Massawippi, Libbytown, Kingscroft, Barnston and Ways Mills. The weatherman has been very kind to motorists to date which simplified transportation.

The Reverend Mr. Gorman of Barnston, who was secretary of a Forum at Sutton while he was there, made a very good chairman. Our old standby for years, W. G. MacDougall, chief Agriculturist for the district, was guest speaker. He had been asked to tell the gathering about the various assistance policies for the farmer offered by the Provincial government. In spite of their

frequent publication many farmers are still unaware of them. He particularly emphasized the policy for blood-testing of cattle with vaccination where advisable since there is such a good export market for dairy cattle in this section. Some states will permit entry only to cattle from a herd which is all negative to the blood-test. Of course the danger in buying animals with a negative reaction from a herd containing positive ones is only too obvious. The freight assistance policy on limestone also got special mention as so many farms in the area lack lime.

At the close of his speech he offered the listeners a chance to ask questions and I think more were asked than would have been before forums developed the farmers' ability for discussion. The price of milk and butterfat furnished quite a topic since most of the farmers present were either Carnation milk shippers or members of co-operative creameries. There was one persistent request for a

survey to find the cost of producing in the section as a basis for price boosts. This led to a discussion of just how production costs for various farm products could be determined.

Mr. MacDougall quoted from a milk cost survey made in the Sherbrooke section some years ago to show what was considered then. However one farmer commented that the cost of home-grown feeds was only estimated in this survey. The speaker could not say at the moment just what profit over this production cost shippers received at that time.

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M 46-10

Cost accounting also brought up farm book-keeping in general and the matter of filing income tax reports which most of them seemed to find so complicated. Mr. MacDougall also mentioned a proposal for a short course on Co-operatives or Taxation. No definite decision on the desirability of this was reached but there seemed to be considerable interest in the accounting angle.

Some men wanted to know about getting a type of bulldozer for removing brush and stumps which did not push off so much surface soil. The speaker thought such things would be available but not at present. One thing needed was more teeth in the contracts signed by owners of bulldozers to do farm improvement work. Due to the ability of other businesses to offer better pay for them, these men would sign a contract for farm work but leave it any time they got a chance for other work. Farmers should be accustomed to the fact that they cannot compete for services. However the damage is greater when a bulldozer quits in the middle of a job than when the hired man leaves for a factory job in the middle of haying.

Only the smell of the coffee drifting up the stairway put an end to the discussion and caused a rush for refreshments. In the course of these the chairman asked each person to rise and give their name and the name of their forum. Then he asked each Forum to rise in

turn and give a chance for counting noses. Thus when we get together again we will be better acquainted with each other. We might even have a rise in butterfat by then, probably with the cream skimmed off it by a boost in the price of feed.

When to Pre-Milk Cows

The two main reasons for milking a cow before she freshens are to protect the udder from possible injury and to prevent milk fever, reports Dwight Espe, Iowa State College dairy specialist.

Some high-producing cows develop extremely large udders before they freshen. An udder from one of these cows may weigh as much as 150 pounds, and the internal pressure may be intense. With this kind of an udder, nature often starts reinforcing the gland. The spaces which originally were filled with milk, blood and other fluids start to fill with fibrous tissue. Relieving the pressure will stop this filling-in process.

Milking before freshening also will relieve part of the weight and help prevent stretching and breaking away of the udder.

Mr. Espe says the big disadvantage to the practice is that the first milk of the cow, the colostrum, is lost. The calf needs colostrum, which helps protect it from disease.

If a cow is pre-milked, the calf should

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For best results follow
the instructions exactly



be given a blood transfusion and vitamin A concentrate.

In Mr. Espe's opinion, the average dairyman will want to practice pre-milking only if he has cows with a tendency toward milk fever or with udders that are in danger of breaking away or becoming injured.

1946 Wool Clip May Be Less

The bulk of the 1946 Canadian wool clip has reached the warehouses. Eastern domestic receipts have practically all been graded but in the case of Western grown wools, the larger warehouses have many carloads to be handled. Complete information for either quantity or quality of the 1946 clip is not yet available, states the *Current Review of Agricultural Conditions in Canada*, but reports indicate that there will probably be a moderate decrease in volume as compared with 1945.



THE WOMEN'S INSTITUTES SECTION

*Devoted to the activities of the Quebec Institutes
and to matters of interest to them*

New Year's Resolutions for Gardeners

by F. Grace Yates

Most of us like to start the New Year with a host of good resolutions dealing with such matters as our methods of homemaking, our families, even our friends. Strangely enough, however, few of us think to include gardening in our plans for improvement. But, this year, why not be different? Why not make a few resolutions that, if kept, will ensure a super-successful 1947 gardening year? These resolutions will vary, of course, with the needs of the individual, but my own list, which follows, may offer a few suggestions...

Therefore, I resolve:

(1) To grow at least one new vegetable and flower; not just an improved variety, but a genus entirely new to me. Each trip to the garden becomes an adventure when some out-of-the-ordinary plant is developing there. For years, I have hesitated over Okra; this spring, it will be the first item on my seed order and I'll discover for myself if the recipe books have grossly exaggerated, or if it really does add an extra-delicious flavor to soups and stews. And here, among the flowers, is a variety bearing the quaint, intriguing name of Wishbone Flower (*Torenia*) and described as a bushy plant covered with snapdragon-like blooms of a deep sky blue, with a touch of gold on the lip. They sound lovely enough for the finest garden in the land!

(2) To place all garden rubbish and other refuse on a compost pile so that I may be assured of an adequate supply of rich, organic humus. Also, to purchase a can of one of the specially prepared powders which will speedily convert this waste into fertilizer.

(3) To burn diseased plants as soon as I discover them,

instead of waiting "just a day or two" until the entire planting is infected. And, before destroying, I will make every effort to identify the disease and find out methods for its control, in order that next year's crop may be protected.

(4) To consign inferior varieties to the compost heap and *not* pass them on to the beginning gardener across the street! If an Iris, for instance, is weak stemmed, muddy in color, and generally unworthy of a place in my garden, it is equally undesirable in a neighbour's planting.

(5) To try as many as possible of the modern aids to better gardening. The catalogs list such exciting new discoveries, nowadays! I shall inoculate my garden peas and beans, my lupins and sweet peas with Nitragin; I'll use Seed-Less-Set for earlier, better tomatoes and peppers. I'll buy a few pounds of Vermiculite, the wonder material for starting difficult seeds and cuttings; best of all, I am going to order a non-rusting, brass and copper continuous sprayer for applying insecticides, instead of trying to "make do" with a tiny, glass and tin affair!

(6) To acquire at least one good garden book or subscribe to a garden magazine. "Knowledge is Power," in gardening as in everything else. Far better to learn from a book, exactly how to prune those shrubs which have grown out of bounds, than to go at it haphazardly, trusting to luck — and nature — that all will be well.

(7) Finally, I resolve to share my garden. To take time, no matter how busy I may be, to send a few of those crisp, juicy heads of lettuce that are wasting in the garden, to someone who can make use of them. To say, when someone admires my double yellow Hollyhocks, "I'll save you some seeds" and really remember to do it.

Getting Ready for the Institute Meeting

by Eva K. Bennett

I think I am all ready for the W.I. — I have my house all clean, even to the stove, but I suppose some of them will find something to talk about. (My, how I do hate a gossip!) I do hope I have a good meeting and all will come. I am not having the meeting to show my house or to let them know what a good cook I am, but I guess I can have as many kinds of cakes as Mrs. L. She had three kinds; well, I have four. I hate this notion some folks have of trying to get something better than others.

I hope if Mrs. S. comes she won't wear two hats like

she does at Church, being Scotch I suppose she puts the old one on top to save the new one.

If Mrs. R. comes we will have some singing; I always like to have singing; it sort of cheers up our meetings. If Mrs. C. doesn't get here I know she is making quilts. She keeps right on making quilts even if the war is over. Well, I suppose the quilts will be needed just the same. Mrs. A. will be talking about that pressure cooker she is going to buy; she can cook good enough without that. I have no doubt Mrs. B. will wear that white hat that looks

so ridiculous, I don't care so much coming here if she has sense enough not to wear it to the semi-annual convention.

There is to be a handicraft exhibition this time. That will give everyone a chance to show what they can do. Our county president, Mrs. Parsons, excels at that kind of work and at making apple jelly. I would like to know how she makes her jelly to get first prize every year at the fair. I know though I could make as good jelly as her if I tried.

It will be nice to see our pretty demonstrator again. I am glad she hasn't fallen in love and left us like so many of the others, but I would think some of the Compton County boys would try to keep her here.

I am sure though, all will agree with me when I say we are W.I. members before anything else. The W.I. stands for the highest kind of education, the kind we give ourselves. So we must be a body of intelligent and well-informed women, striving for the spirit of peace and good will which will permeate into the community, the country and the world at large. No better organization exists today for dealing with racial differences than the Institute. We rural women have a chance at each monthly meeting to learn from each other, to improve conditions in our homes and thus make rural life more attractive. This will help to keep our boys and girls happier and contented and away from the city.

(An original reading given at the semi-annual meeting of the Compton County W.I. and used here by kind permission of the author)

Health And The School

by G. A. LeBaron

The four freedoms of the Atlantic charter mean little without health, for without health we have left only the freedom to die. If we accept the definition of health as "the ability to live most and serve best", then we appreciate that health education means healthy behaviour.

We have come to regard February as the month in which we pay special attention to health measures. Our Handbook states the objective of the Welfare and Health convenorship "to promote the welfare of the child and the health of the public, co-operating to this end with the health authorities and social agents."

Because of the numerous opportunities in the school to promote health among the pupils, let us this year turn our attention to the school as a means of protecting and improving the health of the pupil, his family and the community.

The school health programme is composed of several specialties which actually should require the services of experts; sanitation, health services, health instruction, physical education and mental hygiene. Many individuals and social groups are thus included in promoting school health.

One of the first concerns of the health program is the

provision for pupils of sanitary living conditions. Generally speaking, such conditions are fair in cities and towns. In the country the new schools are built according to specifications approved by the Dept. of Education. Many small rural schools present an even greater problem. Some could be modernized, others might consolidate. Certain essentials should be required for every school, and societies and individuals interested in the healthy environment of pupils may well consider that the school should be thus equipped. Running water, drinking fountains, flush toilets — the system to be frost proof or the building to be kept heated during the cold season — are among these essentials.

The cultural atmosphere and the comfort of a school also should be considered. Additions to the library, pictures, magazines, improving the teachers' rest room, or the pupils' First Aid Room, are all examples of such activities.

Mental disease, one of the greatest threats to school children today, is another problem confronting public schools and teachers. Clinics for treatments for mental disturbances would be of value. Vocational guidance may also be considered in this connection.

The public school teacher is expected to provide health instruction for pupils. To her teaching may be added an occasional talk by a physician or remarks by a visiting nurse. Advice from an athletic coach may also be influential.

Nutrition should have an important place in health education. The school lunch in all schools should be a means of training and instruction.

The ultimate objective of health services is to bring about the elimination of conditions that prevent the child's progress in the school and of permanent defects liable to reduce his future working capacity.

The provision of the greatest advantages for every child, physically, mentally, morally and spiritually, will mould our boys and girls into the best types of Canadian citizens.



The executive of Sherbrooke Co., W.I., left to right: Mr. C. B. Peake, Divisional Supervisor Magog Print Works, who was guest speaker at the Semi-annual, Mrs. W. T. Evans, vice-pres., Mrs. W. T. Pearson, pres., Mrs. H. Worster, sec.-treas.

The Month With The W. I.

Reference to the sending of Personal Parcels will again have to be omitted in order to conserve space, but Miss Walker reports this project has gone over the top with all 100 addresses now taken. That means all branches are undertaking this worth-while service with the exception of those who had been sending parcels regularly previous to this time.

You will notice also that the praise-worthy work of sending cheer to all those in need of such service is not mentioned. Please do not feel that means it is not important because it is. No one can fully evaluate what this thought means to the recipient and the members are to be commended for never forgetting their task. As more branches are added to our numbers, (Miss Walker now reports 96), it means routine work like the above cannot be included in these reports. Even then we have not room for everyone. But don't be discouraged. Let us hear from you all and we will pack in all the activities we possibly can.

Argenteuil: Brownsburg branch visited a local pasteurization plant and were entertained to tea by the owner, Mr. A. Lacasse. Mr. Heon, M.P. was a guest speaker at their regular meeting and gave an illuminating talk on "Legal Protection for Women in Quebec". Frontier heard an address on "The Power of the Press" given by the publicity convenor, Mrs. Graham. A word-making contest provided relaxation. Lachute donated money to purchase a power-driven saw for the Manual Training room at the school. Eleven war brides were entertained at afternoon tea. A musical programme was presented and spreads given to the guests of honour. This branch is enjoying a McGill Travelling Library. Lakefield: a contribution was made to the Q.W.I. Service Fund and Blue Cross fees were paid. Mille Isle also gave a donation to the Service Fund. A paper on nursery schools was read by the convenor of Education. Morin Heights presented a life membership to a member in honour of her 25th wedding anniversary. A military whist and a sale of home-cooking netted a satisfactory sum for general funds. Pioneer also presented a life membership to one of their faithful workers. A talk on the work of UNRRA was given by Mrs. A. Taylor of Lachute. Upper Lachute — East End remembered two brides with gifts and heard a thoughtful talk on "Education in the Home", by Rev. Chas. McLean. This branch co-operated with the Jerusalem-Bethany Institute in sponsoring a banquet for their returned service men and women. This was served in the town hall at Lachute, which was donated for the occasion, to a large gathering numbering about 200. There were the usual toasts with Mr. Stuart Armstrong as chairman. A signet ring was given each man and a bracelet to the women. Music for dancing was furnished free of charge by Lowe's orchestra.

Brome: Abercorn gave a shower of useful articles for a war bride and hospitalization was discussed. Sutton; a quilt was donated and sold to raise funds for the treasury.

Bonaventure: New Richmond made a generous donation of money, clothing and bedding to a needy family. An article on "Peace" and a guessing contest formed the programme. Two new members were welcomed, one a war bride. New Carlisle presented a gift to their former treasurer in recognition of her efficient service. Port Daniel donated \$10 to the Service Fund and \$4.50 to the Junior Red Cross. This branch is sending a special Christmas box to the Sway branch of the W.I. in England. Shigawake; the provincial convenor of Nat. Inter. Relations, Mrs. H. H. Mortimer, was a guest at their meeting.

Chat.-Huntingdon: Aubrey-Riverfield held an all-day session when 3 warm quilts were made and sent to Miss Wales, in charge of Social Service work at Verdun. A large box of books, toys and games is also being sent. An exchange of gifts and two Christmas stories lent a seasonable touch to the programme. Dundee donated \$10 to their school, holding a dance to raise funds. Greeting cards were also sold for the same purpose. Convenors gave the usual short items, interesting facts about Canada were related by various members and an exchange of gifts concluded a profitable meeting. Franklin Centre; another timely programme is noted here; a sale of gifts, a Christmas story read and the singing of carols. Sewing is being done for the Red Cross. Huntingdon reports the splendid sum of \$49.50 sent to the Service Fund. A committee has been appointed to supervise the preparation of articles for the county W.I. booth at the Ormstown fair next summer. A member was also appointed to serve on a committee for the Boys' High School Band. In a recent issue of the Journal it was stated that Valcartier Institute has 50 members and the question was asked "Is that the largest branch in the province?" Huntingdon says they can top this with 52 members. Can any beat that? Ormstown had a busy month. Luncheon and dinner were served to 125 students and guests at the Student Council Conference and on a later date the branch catered for a banquet for 135 members of the local Holstein Breeders' Club.

Compton: Brookbury reports \$2 to the Salvation Army and \$5 to assist with hot lunches in the school. A card party is being arranged to raise funds for their share of the county project, furnishing a room in the new Sherbrooke Hospital. Bury; \$10 to the Sherbrooke Hospital and \$11 for school prizes are noted here. This branch had the pleasure of a visit from an Institute member from B.C. who gave an interesting account of their activities in that province. A life membership was given the secretary in recognition of her many years of faithful service in various offices. Three war brides were also presented with

gifts. Canterbury entertained Miss Walker who gave a demonstration on School Lunches. A stork shower was held and plans made for the children's Christmas treats. Cookshire appointed a committee "to stimulate the members to a more serious sense of their responsibility as voting citizens of community, province and dominion," quoting from their report. A radio has been purchased for their school and White Gifts presented to the Jr. Red Cross. East Clifton had a programme on "Welfare and Health" when the convenor of that department gave a talk on the benefits of the Health Unit. A humorous reading, "He wasn't in it" and a word making contest made a pleasing programme. East Angus had a month of "giving". A welcome for their war brides when each was presented with a polished wood cake plate, a gift to a member leaving the community, school prizes in Grades 1 and 7, and \$5 to the Sherbrooke Hospital made an impressive total. Sawyerville won the prize for the Thrift Exhibit held in connection with their semi-annual county meeting. Major Wells Bishop was the guest speaker at their meeting and gave a vivid account of some of his experiences while held a prisoner by the Japanese at Hong Kong. Two new members were added to the roll and a subscription taken out for the Parents' magazine. Scotstown; congratulations to Mrs. P. A. Sherman, pres. of this branch, who had been appointed to the Central School Board just newly formed. An all-purpose X-ray machine, costing \$2600, has been purchased for the Dr. C. M. Smith Memorial in memory of the boys from that district who paid the supreme sacrifice. A get-together was arranged for the 7 war brides and all attended the last Institute meeting and spoke on her own country.

Pontiac: Beach Grove; a surprise box which netted \$1.45 and an exchange of sugar-saving recipes were features of the meeting. An amusing rollcall is noted, "Name a Household Task you would like your Husband to do". Bristol Busy Bees heard an instructive address by Miss Naudette, Supt. of the Community Hospital, on "Tuberculosis — from 5 to 20 years of age." A demonstration by a member on "Smocking and Fagotting" and a donation to the Service Fund is also mentioned. Clarendon; Miss Smith, teacher of Household Science at Shawville School gave a talk on "Salads" and handed out many appetizing recipes. She also held a demonstration on "Preparation and Serving of the Daily Menu". Elmside discussed two papers, "What Canada Makes, Makes Canada" and "The Old Squeeze all over again". This branch joined Bristol for a demonstration given by Miss Walker on "The Pressure Cooker", "Cake Icings" and "Sandwiches". Shawville; Rev. Mr. Randall gave an informative talk on Current Events. \$20 was given to the Service Fund. Starks Corners held their first meeting after a holiday of three months. Books were presented to pupils in two schools and a banquet given to their returned men in co-operation with other

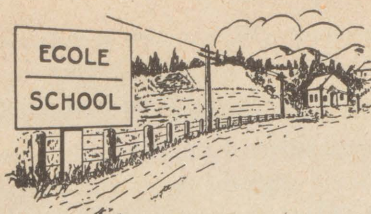
societies of the community. Wyman also reports a demonstration by Miss Walker, the subject — "How to Fasten Things". A donation to the Service Fund is also noted.

Richmond: Cleveland voted \$15 for hot lunches in the school and are assisting with the candy and fruit for the community tree. A valued member was presented with a life membership. A most successful sale was held netting \$80. Dennison's Mills reports an enjoyable card party for the benefit of the treasury. Richmond Hill held a chicken pie supper and dance to replenish their funds.

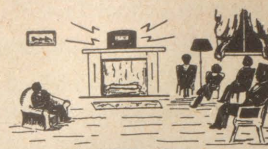
Rouville: Abbotsford tells of a money-making roll call. Articles made from Canadian material were handed in as a response and then auctioned off, bringing in the sum of \$14. \$5 was sent to the Military Hospital to provide gifts.

Shefford: Granby Hill is making plans for the annual Christmas tree. Gifts were exchanged and an auction of articles donated by the members proved satisfactory. South Roxton had a novel and seasonable contest, a line was given from a carol, the members humming the tune to fit. Plans were made for the community tree and a party held for a returned man and his English bride when they were presented with a gas lamp. Warden; here are the quilt-makers again — two more are to be made and sold to augment the funds. Plans were made for the usual Christmas cheer and gifts were exchanged.

Sherbrooke: Brompton Road is planning a Christmas sale and tea and are assisting with the treats for the children. \$15 was voted the Service Fund, \$3 to the V.O.N. and hot lunches are being served in the school. Belvidere held a special celebration in honour of their 30th anniversary, complete with birthday cake and their history reviewed by Miss Drummond. A successful rummage sale was held and \$5 donated to the Sherbrooke Hospital. Cherry River reports a splendid increase when 7 new members were added to the roll. An entertainment was furnished by the pupils prior to the meeting. A donation was made to the Salvation Army and plans made for a Christmas party and sale of hand-made articles. Lennoxville is giving \$3 per member to assist in the county project, furnishing a room in the Sherbrooke Hospital, and \$5 was voted the Service Fund. Sketches of the leaders of the "Big Five" world powers were given by various members and proved most interesting. Local war brides were invited to the tea at the close of the meeting. Miss Walker is giving a demonstration on sewing to this branch. Milby; Mrs. Alex Savage of Sherbrooke, gave a stirring account of her experiences as a Red Cross nurse in the Magdalen Islands. She was presented with a gift as she is a recent bride. Other items noted are a donation of \$10 to the Service Fund, a "grab" sale netting \$5 and three new members enrolled. Orford heard short items on timely subjects. Pamphlets on Health were also discussed.



LIVING AND LEARNING



What Does Chemurgy Offer Farmers?

NEW uses for farm products were discussed in a farm forum broadcast originating at Macdonald College in December. Over a nation-wide C.B.C. network Dr. W. D. McFarlane, head of the Chemistry Department at the College, J. G. Morazain, industrial chemist for the Co-operative Federee de Quebec, Montreal, and J. D. Lang, a farmer from Brysonville discussed possible developments in chemurgy. The meeting was sponsored by the Rural Problems Club, a farm forum of Macdonald College students.

"Chemurgy," said Dr. McFarlane, "was originally defined as the application of chemistry to the finding of new uses for agricultural products. But it has come to mean simply the processing of farm products by industry, either for food or non-food uses." He pointed out that before the war 12 percent of the world's agricultural production was going into industrial uses, to produce linen, starch, vegetable and animal fats, oils and many other widely-used products.

The chemurgic industry expanded rapidly during the depressing years of the thirties, when huge surpluses of farm products piled up, and something had to be done with them. Scientists saw a possible solution in the development of large-scale industries to use these surpluses for the manufacture of chemicals, plastics, etc.

Although the percentage of farm products going into chemurgic industry is not known, in 1940 Canadian industries engaged in processing bought \$434,000,000 of farm products. This market now takes all our production of flaxseed, sunflower seed, soybeans and sugar beets, as well as considerable flax straw and an increasing proportion of our corn, potato, wheat, milk and horticultural products.

But, Canada is still far behind the States in chemurgy, said Dr. McFarlane. Much of the Canadian development is still in the research stage. The National Research Council has carried on extensive studies on such things as producing starch and gluten from wheat and the production of chemicals by fermentation.

Mr. Morazain pointed out that industry has also developed its own research — that millers have carried out a tremendous amount of research to find uses for their by-products, and that manufacturers of fine paper have tried to develop straw from seed flax for their purpose.

There were three main uses for chemurgy, said Mr. Morazain — in providing markets for surplus products,

for waste and by-products, and for crops specially grown for industrial use, such as sugar beets, flax and buckwheat used for the manufacture of a drug — rutin, which is used to correct high blood pressure.

It was pointed out that to start up a chemurgic industry the manufacturer must be assured a year-around supply of raw material, year after year. To get such a supply he must offer a fairly constant, attractive price to farmers. Ease of collection must also be considered, to keep down costs.

The speakers agreed that much more research was needed in the field of chemurgy before its practical possibilities would be fully known, and that most of this research would have to be done by the government. Mr. Lang asked that the results of the research be made known to the farmer just as soon as they are available.

Mr. Lang wanted to know whether the financial benefits from chemurgic processing of agricultural crops get back to the farmer. He was told that it did by providing him with a profit for a surplus of an otherwise unmarketable product such as potatoes, and also reducing the volume on the food market, thus helping to keep prices up.

Mr. Morazain said, however, that there was no assurance that financial benefits from new processes would be passed along to farmers unless they organized to set their own prices. He suggested that the farmers in a community co-operate to collect perishable raw materials and put them through primary processing. Then the product could be held for marketing when a reasonable price was agreed on.

He also contended that co-ops have a field of their own, in the production under contract of basic farm products for industry, and collecting these products in central plants, thus supplying a steady source of raw materials for industry, and assuring farmers of a reasonable price through collective bargaining.

It was agreed that the big stumbling block in chemurgic development was economic — finding a basis that would make it worth while for industries to process farm crops, and profitable for farmers to grow the raw products. Dr. McFarlane suggested that representatives of all the groups involved co-operate in finding a workable solution.

Chairman of the meeting, which drew an audience of 400 students and members of farm forums at Lachute, Chateaugay and Rougemont, was Jas. MacNeill, president of the Rural Problems Club.

What Farm Forums Are Saying

Spooner Pond, Richmond Co. "We would like to see an experiment carried out in each community for the different crops which are grown on the various types of soil."

Secretary, Mr. R. E. Lampron

Fertile Creek, Chateauguy Co. "We have been growing the same crops in this community for a good many years. We do this mostly from force of habit and we do not know if there are other crops more suited to our land. Some research in this might lead to better production."

Secretary, Miss May Anderson

Iron Hill, Brome Co. "We think that there should be a good deal of research done regarding the spread between the producer and consumer. For example a cow hide sold at 10c per lb. when bought back by the farmer costs \$1.60 per lb."

Secretary, Mrs. Herman Fulford

Kingscroft, Stanstead Co. "There is too much waste, growing bushes that are of no use as pasture or as forest. We need a better means of dealing with this problem."

Secretary, Mr. Carl Corey

Staynerville, Argenteuil Co. "For some years past one of our neighbours has had a demonstration farm. Much

has been derived from it, especially underground drainage and the use of lime on soil.

Secretary, Mrs. Bazil Clark

North Potton, Brome Co. "We want films and more films from the Department of Agriculture, and more extension workers, not to sit behind desks, but to work among the farmers on call from groups or occasionally individuals."

Mrs. Ernest Bradley

Abbotsford, Rouville Co. "We are all members of our local co-operative plant, which processes our cull apples into apple juice. It has been an excellent thing for the community as it keeps the poorer grades of fruit off the market, and in the case of being hailed out it is equipped to handle this surplus fruit which would otherwise be a total loss as it is unfit for consumption and will not keep."

Secretary, Mr. W. Boyd Honey

Sandy Beach, Gaspé. "There is need for a crop that will provide a livelihood from six or seven acres of land."

Secretary, Mr. Austin D. Miller

Kinnear's Mills, Megantic Co. "It is thought that the industrial use of farm products would mean certain shortages in the city because it would be necessary to pledge a certain supply to the factories in a year."

What Farm Forums Are Doing

Birchton, Compton Co. "One member suggested that the Forums of our county should meet at the local Experimental Farm for a Field Day. This matter was handed over to the County Forum Committee representative for him to try and make arrangements."

Secretary, Miss Alice Thompson

Brooklet, Huntingdon Co. "Our Forum along with other Hinchinbrook Forums, is sending three members to interview the school board on the question of consolidation of the local rural school."

Secretary, Mrs. Fred Elliott

Haldimand, Gaspé. "At our December 2 meeting we formed an action group, with C. K. Suddard as president. To date one shipment has arrived with a saving of 30c per cwt. We would like to have more information on co-operatives and how they operate."

Secretary, Mr. Winston Robin

East Farnham, Brome Co. "We are working on projects for our young people—a skating rink and a record player."

Secretary, Mr. Fred Shufelt

Herdman, Huntingdon Co. "A petition was drawn up to be presented to the town council, regarding the black-topping of all important roads, and the re-surfacing of others."

Secretary, Mrs. John M. Wallace

Cowansville, Missisquoi Co. "We were pleased to have Mr. Rousseau, the Agronome for this county, as our guest and he gave us a talk on farming for profit, by book-keeping."

Secretary, Miss Isabella Beattie

McIntosh Corner, Huntingdon Co. "Three members were elected to attend the forthcoming meeting of the School Board."

Secretary, Mrs. Robert Steele

Mansonville, Brome Co. "We arranged for a meeting on Monday, December 23, in the Town Hall for our Christmas Party. The program will be a film (Dickens Christmas Carol), singing of Carols and luncheon. All Potton Township groups have been invited."

Secretary, Mr. W. J. Young

Selby Lake, Missisquoi Co. "Our Forum had an oyster supper tonight replacing our usual lunch."

What Farm Forums Are Asking

Sandy Beach, Gaspé Co. "We would like information on a type of early potato that will resist rot and also an earlier ripening tomato. *Secretary*, Mr. Austin D. Miller

Answer:

"Insofar as the potatoes are concerned we would recommend that you try two new varieties known as "Warba" and "Chippewa". You might also try "Katahdin", but it may be a little too late. So far, we have been unable to introduce a new variety which is resistant to late blight. If this disease reaches epidemic proportions, the best control is careful and consistent spraying with Bordeaux mixture. If in spite of these control measures the disease should become very bad you should kill the tops by spraying with a solution of copper sulphate (Bordeaux mixture without lime). If the potatoes are left in the ground until the tops are entirely dead, you have a chance of harvesting what few there are fairly free from rot.

"In regard to the tomatoes, I would suggest that you write to the Dominion Horticulturist, Central Experimental Farm, Ottawa, and ask him for samples of some of their newer early maturing varieties which are recommended for the more northern sections."

H. R. Murray, Chairman,
Dept. of Horticulture, Macdonald College

Spooner Pond, Richmond Co. "When a customer goes into a store and buys maybe eight or ten articles at the various counters, each of which cost 10c or 15c, should he be asked to pay sales tax on each individual purchase?

Secretary, R. E. Lampron

Answer:

"When a customer goes into a store and buys from eight to ten articles at various counters, the tax must be charged on the total amount of the purchase price, if there is only one invoice made covering all purchases.

"If, on the other hand, the same customer buys several articles from different clerks and pays for each article separately, the tax must be charged on each purchase.

"Please note that sales for a price of 10c or less are exempted."

J. R. Bourgeois, Officer in charge
Sales Tax Service.

Dunkin, Brome Co. "Our farmers would like to know the best kind of oats to sow that will resist rust; also more information about potato blight."

Secretary, Mrs. Elizabeth Bailey

Answer:

"If stem rust is the problem, I suggest that you try Vanguard, Beaver, or Ajax oats. The Ajax is earlier than the other two. The Beaver has not been widely tried in Quebec, but is considered very promising. It is also reasonably resistant to leaf rust.

"The Roxton, ripening about the same time as the

Banner, probably is more resistant to leaf rust than any variety now available for Quebec. It also has considerable resistance to stem rust, but not as much as have some other varieties."

Emile A. Lods, Assoc. Professor of
Agronomy, Macdonald College.

Clarendon No. 4, Pontiac Co. "We would like very much to get the address and information on the Provincial Forestry Service. Our group is interested in planting trees."

Secretary, Mr. George Coles

Answer:

"I am pleased to inform you that a Forest Information Office has been opened in Hull since last July. This office was established for the benefit of all small woodland owners as well as farmers. The Hull Division covers four counties, namely: Pontiac, Hull, Gatineau, and Papineau. The services given by the Forest Engineer in charge of a division are free of charge.

"Everybody who asks for it, may have information in respect to forest management, silviculture, reforestation, marketing of forest products, etc.

"I was informed your group is interested in planting trees. I enclose a few copies of Order in Council No. 1015. It concerns regulations of woods and forests relative to reforestation.

"Would you be kind enough to prepare a list of members of your group who are interested in reforestation. I intend to contact each of them and to visit the land to be reforested at the next spring."

Romeo Chamberland, E.F.
Chief of the Hull Division
Forest Information Office

South Durham, Drummond Co. We would like to know how to kill mustard.

Secretary, Miss Muriel A. Watt

Answer:

"If growing in grain or other grass crop, a spray of SINOX before the grain is four inches high will be found effective. This preparation is manufactured by Standard Agricultural Chemicals, Inc., and may be obtained from John Brodie and Co., Ltd., 79 Queen St. East, Toronto. Directions for use are supplied by the manufacturer. The estimated cost is \$3.00 per acre.

"If the mustard is growing in a vegetable crop, this spray must not be used, as it kills broad-leaved crop plants. Cultivation must be resorted to here. If you write to the manufacturer, be sure to state whether the weed is in a grain or in a vegetable crop.

"Finally, if the weed is present in a grain crop such as wheat, and you do not wish to spray, spring weeding with a harrow on a warm dry day when the wheat is about four inches high will destroy most of the mustard seedlings."

H. J. Scoggan, Dept. of Plant Pathology
Macdonald College.



THE COLLEGE PAGE

The Macdonald Clan

Notes and news of staff members and former students

Another Class of Rural Repair Shops Students Completes Training

On December 19th, the second group of students in the Rural Repair Shops Course for veterans received certificates on having successfully completed the course. Dr. W. H. Brittain, Vice-Principal of the College, Lieut. Col. M. Archambault, Superintendent of Rehabilitation Training for Montreal district, and Mr. Landry, Regional Director, Canadian Vocational Training, addressed the men, congratulating them on the completion of their training. Certificates were presented by Col. Archambault and Prof. L. G. Heimpel, Chairman of the Department of Agricultural Engineering, who was in charge of the course.

The training consists of six months instruction and shop practice in Farm Machinery, Farm Tractors and Power Machinery, Machine Shop Work, Oxy-Acetylene and Electric Welding and Blacksmithing, together with lectures in Agriculture and Arithmetic. An exhibit of work done by students in the shops prompted considerable praise from the visitors following closing exercises.

The class consisted of twenty men who started the course at the beginning of July, and nearly all of them expressed the intention of establishing shops of their own. A few hope to secure work in the farm implement business, and it is hoped that, under the new agency system being set up by the farm machinery firms, this will be possible. Under this new plan, by the way, larger dealerships in rural centres will replace the smaller implement agencies with which farming communities are still familiar. The result of this change should be of benefit to farmers in that more complete stocks of repair parts will be kept, and dealerships will supply more complete service for all lines of machines handled. It is expected also that some of the men from the Rural Repair Shops Course will find satisfactory employment in these larger dealerships.

Better Shops Needed

In the days before the tractor became common, the blacksmith's shop could handle most farm repair work, but now this is no longer the case. The modern farm shop will have to handle milking machine repairs, and service electric equipment such as water pumps, grinders, and other modern equipment of the electrified farm. There



will also be more farm machinery repair work, much of which will require a knowledge of oxy-acetylene and electric welding, as well as machine work.

Already there are a few modern rural repair shops in scattered communities, and the service they are rendering is proof of their need. The training provided by the Rural Repair Shops Course will fit mechanically inclined men to take care of the variety of repair work farmers require. The operation of such a service makes pleasant and remunerative employment for those engaged in it. Living conditions in rural towns or villages also are much more desirable than in the cities, another advantage to the veteran who prefers rural or semi-rural life.

The next class will arrive at the college January 7th. Veterans who are interested in this kind of training should consult their local D.V.A. advisers concerning the course and make early application.

Our photo, taken on the day of graduation, shows the students and, in the front row, their instructors. These are, from left to right, Prof. L. G. Heimpel; Prof. J. G. Cooper, instructor in mathematics; A. Lindsay, who teaches forge shop work; I. W. Knight, instructor in welding and machine shop practice; J. W. Bourne, who teaches tractor and farm machinery operation and repair; A. C. Malloch who gives instruction in general agriculture. The young lad in the foreground is the class mascot.



**NEW TECHNIQUE IN THE TREATMENT OF
BOVINE MASTITIS**

SULVETIL

Sulvetil is the trade-mark for a homogenized suspension of sulfanilamide in light mineral oil designed for injection into the infected quarter through the teat canal in the treatment of streptococcic or staphylococcic mastitis. The new Abbott specialty is supplied in bottles containing 50 cc. of the suspension, a quantity generally sufficient for one injection into an infected quarter. In streptococcic mastitis, Kakavas* and his collaborators determined the infected quarters by making cultures of the milk on tryptose-blood agar. Each infected quarter was emptied and 40 cc. of the sulfanilamide in oil emulsion was injected into the quarter by means of a hypodermic syringe and a teat-tube. Breaking down the results, of the total 265 quarters treated, 251 (94.7%) were cured and 14 (5.3%) were not cured following one course of treatment consisting of daily injections of the suspension over a four-day period. Detailed literature on Sulvetil will be supplied on request.

Sulvetil is available through your local Druggist.

*Kakavas, J. C., Palmer, C. C., Hay, J. R., and Biddle, E. S. (1942): Homogenized Sulfanilamide-in-Oil Intramammary Injections in Bovine Mastitis, Am. J. Vet. Research, 3:274, July.

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